

(FILE 'HOME' ENTERED AT 14:35:54 ON 21 MAR 2006)

FILE 'CAPLUS' ENTERED AT 14:36:49 ON 21 MAR 2006

E MADHAVI DODDABELE/IN,AU  
L1 29 S E1-6  
E KAGAN DANIEL/IN,AU  
L2 7 S E2-6  
L3 33 S L1 OR L2  
L4 30485 S CYCLODEXTRIN  
L5 2 S L3 AND L4  
L6 29565 S CAROTENOID  
L7 41440 S CAROTENE  
L8 64 S LUTEINE  
L9 5674 S LUTEIN  
L10 5730 S L8 OR L9  
L11 4830 S LYCOPENE  
L12 4155 S ZEAXANTHIN  
L13 51798 S L6 OR L7 OR L10 OR L12  
L14 126 S L13 AND L4  
L15 823417 S OIL  
L16 41 S L14 AND L15  
L17 139697 S SPRAY  
L18 50060 S FREEZE  
L19 20801 S LYOPHIL?  
L20 67659 S L18 OR L19  
L21 12 S L16 AND (L17 OR L20)  
L22 29 S L16 NOT L21  
L23 85 S L14 NOT (L21 OR L22)

L5 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2006:103653 CAPLUS  
DOCUMENT NUMBER: 144:156235  
TITLE: Oral care formulations comprising highly bioavailable  
coenzyme Q10-cyclodextrin complex  
INVENTOR(S): Madhavi, Doddabele L.; Kagan, Daniel  
I.  
PATENT ASSIGNEE(S): Bioactives, LLC, USA  
SOURCE: U.S. Pat. Appl. Publ., 5 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006024247	A1	20060202	US 2005-190094	20050726
WO 2006015164	A1	20060209	WO 2005-US26882	20050727
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRIORITY APPLN. INFO.: US 2004-591970P P 20040728  
US 2005-190094 A 20050726

AB The present invention incorporates of a highly bioavailable coenzyme Q-10/ cyclodextrin inclusion complex into oral care products, such as, toothpaste, mouth wash, chewing gum, breath mint, mouth spray, gels, and lozenges. The inclusion complex also is suitable for devices, such as dental loops, for delivering coenzyme Q-10 to the periodontium by direct phys. contact. The inclusion complex is water dispersible or water soluble, stable in the presence of components of the formulation, and is highly bioavailable to the cells in the oral cavity.

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:473124 CAPLUS  
DOCUMENT NUMBER: 141:42908  
TITLE: Coated carotenoid cyclodextrin complexes  
INVENTOR(S): Reuscher, Helmut; Kagan, Daniel I.;  
Madhavi, Doddabele L.  
PATENT ASSIGNEE(S): Bioactives LLC, USA; Wacker Biochem Corp.  
SOURCE: U.S. Pat. Appl. Publ., 7 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004109920	A1	20040610	US 2002-309999	20021204
			US 2002-309999	20021204

AB Coated cyclodextrin and carotenoid complexes are stable against oxidation and exhibit higher biouptake than oil-based, lipophile based, and micellar carotenoid compns. The coating may be an oil, or a naturally occurring, optionally derivatized polymer or a pharmaceutically acceptable synthetic polymer. A lutein- $\gamma$ - cyclodextrin complex was prepared and coated with soy oil.

L21 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2006:100639 CAPLUS  
 DOCUMENT NUMBER: 144:176935  
 TITLE: Cosmetic preparation containing compounds for intensifying tanning of the skin  
 INVENTOR(S): Wolber, Rainer; Tom Dieck, Karen; Scherner, Cathrin; Schlenz, Kathrin; Kruse, Inge  
 PATENT ASSIGNEE(S): Beiersdorf A.-G., Germany  
 SOURCE: PCT Int. Appl., 61 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006010661	A1	20060202	WO 2005-EP52493	20050601
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

DE 102004036092 A1 20060216 DE 2004-102004036092 20040724  
 PRIORITY APPLN. INFO.: DE 2004-102004036092A 20040724  
 AB The invention relates to agents that are to be applied to the skin or hair and contain compds. for intensifying tanning of the skin and increasing melanin synthesis in skin or hair. The invention particularly relates to cosmetic or dermatol. preps. Using said preps. results in inducing and intensifying the tanning mechanisms of the skin, intensifying the hair color, and thus also increasing intrinsic protection of the skin or hair. Thus a PIT emulsion contained (weight/weight%): glycerin monostearate 0.50; polyethylene(30)cetylstearyl ester 5.00; cetyl alc. 2.50; diethylhexyl butamidotriazone 1.00; ethylhexyl triazone 4.00; phenylbenzimidazole sulfonic acid 0.50; titanium dioxide 0.50; zinc oxide 2.00; butylene glycol dicaprylate/dicaprate 5.00; phenylmethyl polysiloxane 2.00; PVP hexadecene copolymer 0.50; glycerin 3.00; tocopherol acetate 0.50; (4E, 8E, 12E, 16E)-3,6,11,15-tetrahydroxy-18-(hydroxymethyl)-2,4,6,10,14,16,20-heptamethyldocosa-4,8,12,16-tetraenoic acid 0.05; alpha-glucosylrutin 0.10; ethanol 3.00; preservative, perfume q.s.; water to 100.  
 REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:735830 CAPLUS  
 TITLE: Flavored food-grade microemulsions  
 AUTHOR(S): Naouli, Nabil; Rosano, Henri L.  
 CORPORATE SOURCE: Chemistry, City College and the Graduate Center of the City University of New York, New York, NY, 10031, USA  
 SOURCE: Abstracts of Papers, 230th ACS National Meeting, Washington, DC, United States, Aug. 28-Sept. 1, 2005 (2005), AGFD-172. American Chemical Society: Washington, D. C.  
 CODEN: 69HFCL  
 DOCUMENT TYPE: Conference; Meeting Abstract; (computer optical disk)  
 LANGUAGE: English  
 AB Flavor encapsulation poses unique challenges within the field of microencapsulation. Flavor is a complex mixture of individual chems., including the critical volatile or -aromatic' compds. that define a given flavor. These chems. also determine the flavor's organoleptic and phys. properties and this severely constrains preparation protocols. Of established encapsulation methods--spray drying, melt injection, beta-cyclodextrin complexation, and microemulsification--the last has been little used in food systems, as ingredients known to form microemulsions of the desired degree of dilution are usually either not GRAS (Generally Recognized As Safe) or bitter to the taste. Utilizing new formulation technol., we succeeded in forming concentrated O/W microemulsions of orange or lemon oil made with GRAS emulsifiers that may be delivered by aqueous phases. Our method of preparation involved determination of (1) the precise HLB of the flavored oil at the water/oil

interface, using the titration method; (2) the optimum length of the hydrophobic chain of the emulsifier that will allow the bending of the interface; and (3) the optimum amount of emulsifier for a given volume of the dispersed phase that will impede the formation of gel or macrocrystal structures (lamellae or rods). These transparent systems, characterized by dispersed-phase droplets measuring 10-40 nm in diameter and high solubilization capacities, make excellent hosts for guest mols., including nutraceuticals. Their capacity to deliver such non-soluble nutraceuticals as lutein, phytosterols, and Vitamins E, D, and K is particularly promising.

L21 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:564598 CAPLUS  
DOCUMENT NUMBER: 143:77319  
TITLE: Continuous multi-microencapsulation process for improving the stability and storage life of biologically active ingredients in foods, cosmetics and drugs  
INVENTOR(S): Casana Giner, Victor; Gimeno Sierra, Miguel; Gimeno Sierra, Barbara; Moser, Martha  
PATENT ASSIGNEE(S): GAT Formulation G.m.b.H., Austria  
SOURCE: PCT Int. Appl., 72 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Spanish  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005058476	A1	20050630	WO 2004-ES562	20041217
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

ES 2235642 A1 20050701 ES 2003-2998 20031218

PRIORITY APPLN. INFO.: ES 2003-2998 A 20031218

AB Microcapsules are obtained in a continuous water-in-oil-in-water microencapsulation process through in situ and interfacial polymerization of the emulsion. A formulation comprises a continuous water phase having a dispersion of microcapsules which contain oil drops and in the inside of each oil phase drop (containing optionally oil -soluble materials) there is a dispersion of water, or aqueous extract or water-dispersible material or water-soluble material. The oil drops are encapsulated with a polymerizable material of natural origin. Such microcapsules are appropriate for spray-drying, to be used as dry powder, lyophilized, self-emulsifiable powder, gel, cream, and any liquid form. The active compds. included in the microcapsules are beneficial to health and other biol. purposes. Such formulations are appropriate for incorporation in any class of food, especially for the production of nutraceuticals, as well as cosmetic products (such as rejuvenescence creams, anti-wrinkle creams, gels, bath and shower consumable products and sprays). The prepsns. are adequate to stabilize compds. added to food, media for cultivating microbes and nutraceuticals, especially those which are easily degradable or oxidizable.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:435384 CAPLUS  
DOCUMENT NUMBER: 143:285229  
TITLE: Study on technique of microencapsulation of lycopene  
AUTHOR(S): Zuo, Airen; Fan, Qingsheng; Liu, Yan; Zhou, Jie  
CORPORATE SOURCE: The Key Laboratory of Food Science of Ministry of Education, Sino-Germany Joint Research Institute, Nanchang, Jiangxi Province, 330047, Peop. Rep. China  
SOURCE: Shipin Kexue (Beijing, China) (2004), 25(4), 35-39  
CODEN: SPKHD5; ISSN: 1002-6630  
PUBLISHER: Zhongguo Shipin Zazhishe  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese

AB Spray drying for microencapsulation in a wall material system consisting of compds. such as gelation and sucrose and mass detection for lycopene in microencapsulation were outlined. The studies showed that the stability of lycopene increased by microencapsulation. When Et acetate was used as the oil phase, the order of formulation of wall material for microencapsulation was glutin + sucrose (3:17), glutin 25% +  $\beta$ -cyclodextrin 30% + sucrose 30% + defatted milk powder 15%, glutin 25% + maltodextrin 30% + sucrose 30% + defatted milk powder 15%, soybean hydrolytic protein + sucrose (6:14). The addition of antioxidants (sodium erythorbate) was important for the stability of lycopene. The good microencapsulated products of lycopene were salmon pink, with the well water-solubility, fluidity and stability.

L21 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:274649 CAPLUS  
DOCUMENT NUMBER: 140:338301  
TITLE: Health milk beverages  
INVENTOR(S): Yan, Huaiwei; Yi, Min; Yan, Huaipu; Yan, Huaijin; Yan, Huaiqi  
PATENT ASSIGNEE(S): Peop. Rep. China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 23 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1390466	A	20030115	CN 2002-133531	20020726
PRIORITY APPLN. INFO.:			CN 2002-133531	20020726

AB The title milk beverages contain composite vitamins, composite trace elements (Fe, Zn, Cu), antiseptic composite (lysozyme, garlic oil, cyclodextrin), composite nucleic acids (AMP, GMP, IMP, inosine, DAMP, DGMP, UMP, CMP, DCMP, DTMP), oil, composite hydrolase (lactase, lipase, and caseinase), and full-fat liquid milk or milk powder. The process comprises (1) mixing the raw material of the vitamins, grinding in a rustless steel mortar; mixing FeSO<sub>4</sub>, ZnSO<sub>4</sub> and CuSO<sub>4</sub>, grinding; (3) mixing the cyclodextrin, lysozyme and garlic oil, grinding, drying at below 50°; (4) mixing the raw material of nucleic acids at 50-100 rpm for 5-10 min; (5) mixing the zhugecai oil with sunflower oil, soybean oil, maize oil, peanut oil, cotton oil or safflower oil; mixing the hydrolases for lactose, fat and casein; (7) refrigerating fresh milk at below 10° for not more than 24 h, sterilizing, adding 0.003-0.5% of composite hydrolase, enzymolyzing at 50-100 rpm for 1-2 h; (8) concentrating the liquid milk till its concentration is above 40%, and spray drying till the water content is below 3%; and (9) mixing the components in a sterile room to obtain the product.

L21 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:855813 CAPLUS  
DOCUMENT NUMBER: 139:341715  
TITLE: Use of compositions containing petasin -containing, petasin-depleted or petasin-free petasite extracts as specific COX-2 inhibitors  
INVENTOR(S): Rittinghausen, Reiner  
PATENT ASSIGNEE(S): Weber & Weber G.m.b.H. & Co. KG, Germany  
SOURCE: PCT Int. Appl., 35 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003088985	A2	20031030	WO 2003-EP3756	20030411
WO 2003088985	A3	20040226		
WO 2003088985	C1	20040527		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,			

FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 DE 10217939 A1 20031113 DE 2002-10217939 20020422  
 AU 2003233964 A1 20031103 AU 2003-233964 20030411  
 EP 1499334 A2 20050126 EP 2003-727288 20030411

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRIORITY APPLN. INFO.: DE 2002-10217939 A 20020422  
 WO 2003-EP3756 W 20030411

AB The invention relates to the use of petasin -containing, petasin -depleted or petasin -free petasite exts., and/or at least one petasin -containing, petasin -depleted or petasin -free petasite extract fraction, for producing a pharmaceutically active composition for the treatment and/or prophylaxis of diseases, including joint disease and connective tissue disease, arthritis, arthrosis, osteoarthritis, rheumatoid arthritis, chronic polyarthritis, polyps, adenomas, gastro-intestinal diseases, gastro-intestinal ulcerations, gastroduodenitis, and all types of gastritis, spasms of the gastro-intestinal tract, dyskinesia of the bile passages, colitis, Crohn's disease, thromboembolic diseases, coronary diseases, vascular diseases, peripheral occlusive arterial diseases, inflammation in the coronary vessels, myocarditis, myocardial infarction, unstable and stable angina pectoris, transitory ischemic attacks, apoplexy, reversible ischemic neurol. deficit, prolonged ischemic neurol. deficit, spinal column syndrome, dorsalgia, intervertebral disk disease, hypertension, headaches, migraines, asthma, hay fever, allergic rhinitis, obstructive respiratory tract diseases, skin diseases, Alzheimer's disease, tuberculosis, eczema, psoriasis, dysmenorrhea, bladder diseases, incontinency, painful spasms in the urogenital region, dysuria, tumors, tumoral pain, neuro vegetative disorders, agitative states, anxiety states, sleeping disorders, depression and/or pain. Thus a composition contained (mg): polar petasin -free petasite extract 25.0; medium chain triglycerides 245.0; glycerol (85%) 23.52-27.60; dry matter from 70% sorbitol solution 17.12-20.10; gelatine 80.89-94.96; red iron oxide 0.47-0.55; glycerol 1.60-1.88; black iron oxide 1.13-1.33. Pyrrolizidine alkaloid-free extract was prepared by acid extraction of a preconcd. extract obtained according to a previously described method.

L21 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:300514 CAPLUS  
 DOCUMENT NUMBER: 134:331617  
 TITLE: Oil-in-water emulsion compositions for polyfunctional active ingredients  
 INVENTOR(S): Chen, Feng-jing; Patel, Mahesh V.  
 PATENT ASSIGNEE(S): Lipocine, Inc., USA  
 SOURCE: PCT Int. Appl., 82 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001028555	A1	20010426	WO 2000-US28835	20001018
W:				
AE, AG, AL, AU, AT, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002107265	A1	20020808	US 1999-420159	19991018
US 6720001	B2	20040413		

PRIORITY APPLN. INFO.: US 1999-420159 A 19991018

AB Pharmaceutical oil-in-water emulsions for delivery of polyfunctional active ingredients with improved loading capacity, enhanced stability, and reduced irritation and local toxicity are described. Emulsions include an aqueous phase, an oil phase comprising a structured triglyceride, and an emulsifier. The structured triglyceride of the oil phase is substantially free of triglycerides having three medium chain (C6-C12) fatty acid moieties, or a combination of a long chain triglyceride and a polarity-enhancing polarity modifier. The present invention also provides methods of treating an animal with a polyfunctional active ingredient, using dosage forms of the pharmaceutical emulsions. For example, an emulsion was prepared, with cyclosporin A as the polyfunctional active ingredient dissolved in an oil phase

including a structured triglyceride (Captex 810D) and a long chain triglyceride (safflower oil). The composition contained (by weight) cyclosporin A 1.0, Captex 810D 5.0, safflower oil 5.0, BHT 0.02, egg phospholipid 2.4, dimyristoylphosphatidyl glycerol 0.2, glycerol 2.25, EDTA 0.01, and water up to 100%, resp.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:880937 CAPLUS  
DOCUMENT NUMBER: 134:46783  
TITLE: Pharmaceutical compositions for nasal administration of water-soluble drugs  
INVENTOR(S): Klocker, Norbert  
PATENT ASSIGNEE(S): Hexal A.-G., Germany  
SOURCE: PCT Int. Appl., 19 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000074652	A1	20001214	WO 2000-EP4800	20000526
W:				
AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19925289	A1	20001207	DE 1999-19925289	19990602
DE 19936545	A1	20010208	DE 1999-19936545	19990803
EP 1189596	A1	20020327	EP 2000-935121	20000526
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2005505491	T2	20050224	JP 2001-501189	20000526
PRIORITY APPLN. INFO.:			DE 1999-19925289	A 19990602
			DE 1999-19936545	A 19990803
			WO 2000-EP4800	W 20000526

AB The invention relates to a nasally administered pharmaceutical composition comprised of at least 1 water-soluble drug, neutral oil and, optionally, at least one solubilizer, whereby the addition of preservatives and propellants can be dispensed with. The composition contains essentially no water. Polyhexanide 20 mg was dissolved in 100 mL LMiglyol-812, the solution was sterilized and filled into a pump-spray.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:865097 CAPLUS  
DOCUMENT NUMBER: 134:32988  
TITLE: Nasal pharmaceutical composition for water-soluble drugs  
INVENTOR(S): Kloecker, Norbert  
PATENT ASSIGNEE(S): Hexal A.-G., Germany  
SOURCE: Ger. Offen., 6 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19925289	A1	20001207	DE 1999-19925289	19990602
WO 2000074652	A1	20001214	WO 2000-EP4800	20000526
W:				
AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,				

CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1189596 A1 20020327 EP 2000-935121 20000526  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO  
 JP 2005505491 T2 20050224 JP 2001-501189 20000526  
 DE 1999-19925289 A 19990602  
 DE 1999-19936545 A 19990803  
 WO 2000-EP4800 W 20000526  
 PRIORITY APPLN. INFO.:

AB A pharmaceutical composition for nasal administration consists of at least a water-soluble drug, neutral oil, and a solution mediator, in which no preservatives and propellants are present and the composition is essentially water-free. Thus, polyhexanide was dissolved in Miglyol-840 and the composition was sterilized and filled into a pump spray.

L21 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:608551 CAPLUS  
 DOCUMENT NUMBER: 133:213151  
 TITLE: Pharmaceutical compositions and methods for improved delivery of hydrophobic therapeutic agents  
 INVENTOR(S): Patel, Manesh V.; Chen, Feng-Jing  
 PATENT ASSIGNEE(S): Lipocine, Inc., USA  
 SOURCE: PCT Int. Appl., 98 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 13  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050007	A1	20000831	WO 2000-US165	20000105
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6294192	B1	20010925	US 1999-258654	19990226
CA 2365536	AA	20000831	CA 2000-2365536	20000105
AU 2000022242	A5	20000914	AU 2000-22242	20000105
AU 771659	B2	20040401		
EP 1158959	A1	20011205	EP 2000-901394	20000105
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002537317	T2	20021105	JP 2000-600619	20000105
NZ 513810	A	20040227	NZ 2000-513810	20000105
PRIORITY APPLN. INFO.:			US 1999-258654	A 19990226
			WO 2000-US165	W 20000105

AB The present invention relates to triglyceride-free pharmaceutical compns. for delivery of hydrophobic therapeutic agents. Compns. of the present invention include a hydrophobic therapeutic agent and a carrier, where the carrier is formed from a combination of a hydrophilic surfactant and a hydrophobic surfactant. Upon dilution with an aqueous solvent, the composition forms a clear, aqueous dispersion of the surfactants containing the therapeutic agent. The invention also provides methods of treatment with hydrophobic therapeutic agents using these compns. A pharmaceutical composition contained cyclosporin 0.14, Cremophor RH-40 0.41, Arlacel186 0.29, sodium taurocholate 0.26, and propylene glycol 0.46 mg.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:66005 CAPLUS  
 DOCUMENT NUMBER: 133:16520  
 TITLE: Studies on the whole utilization of "Yuzu" fruit (citrus junos sieb. ex Tanaka) as new food material (Part 1): Utilization of peel and segment wall in residue of Yuzu juice extract  
 AUTHOR(S): Monya, Shigeharu; Bessho, Yasumori; Kodama, Masanobu; Matsumoto, Yasuo  
 CORPORATE SOURCE: Institute Research Center of Ehime Prefecture, Japan  
 SOURCE: Kenkyu Hokoku - Ehime-ken Kogyo Gijutsu Senta (1999), 37, 67-75  
 CODEN: KHESEZ; ISSN: 0286-1844  
 PUBLISHER: Ehime-ken Kogyo Gijutsu Senta  
 DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB In order to utilize the residue of Yuzu juice extract, which has been almost discarded as the waste, the preparation technique of dry powder from peel and segment wall and paste from segment wall were investigated. Some new food materials usable as flavoring matter or edible fiber matter were obtained. The obtained results are as follow: 1. The drying method of peel was most excellent in freeze dry with respect to favor and color. The deterioration of flavor in dry peel powder has been prevented by nitrogen gas packaging and low-temperature storage. 2. The preparation of segment wall powder was achieved by ventilation dry followed by shattering. The cryo-milling was most effective for fining of segment wall paste. The powder and paste contained the edible fiber at the range of about 70% in dry matter. 3. The peel powder can be used as flavoring for several confectionery. The segment wall powder was applied to bread making. The paste of segment wall found to be useful material for jelly and nectar preparation

L21 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:679119 CAPLUS

DOCUMENT NUMBER: 127:322804

TITLE: Primycin compound with cyclodextrin

INVENTOR(S): David, Agoston; Satory, Eva; Szabo, Sandor; Szejtli, Jozsef; Szente, Lajos; Vikmon, Andrasne

PATENT ASSIGNEE(S): Chinoin Gyogyszer es Vegyeszeti, Hung.; Medipharma; Human

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9736935	A1	19971009	WO 1997-HU10	19970328
W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9721732	A1	19971022	AU 1997-21732	19970328
PRIORITY APPLN. INFO.:			HU 1996-847	A 19960402
			WO 1997-HU10	W 19970328

AB Non-stoichiometric compds. (1:0.3 to 4.0 mol ratio) of primycin or its components with a cyclodextrin are described. Thus, 950 g boric acid was dissolved in 45-L water. In a portion of this solution 12.5 g primycin and 25.5  $\beta$ - cyclodextrin were allowed to react by boiling for 1 h, and the product was poured into the above solution and diluted to 50.0L, filtered and filled into eye-drop containers.

L22 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:902535 CAPLUS  
 DOCUMENT NUMBER: 143:235456  
 TITLE: Antioxidant compositions and methods of use thereof  
 INVENTOR(S): Mora-Gutierrez, Adela; Gurin, Michael H.  
 PATENT ASSIGNEE(S): The Texas A & M University System, USA  
 SOURCE: U.S. Pat. Appl. Publ., 14 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005184275	A1	20050825	US 2004-784842	20040223
PRIORITY APPLN. INFO.:			US 2004-784842	20040223

AB Disclosed is an antioxidant composition having enhanced oxidative stability, emulsion stability, and health benefits. The composition may include individual ingredients or a synergistic blend of non-reducing sugars, sugar polyols, medium-chain triglycerides, polysaccharides, polyphenols, phospholipids, chitosan, and  $\alpha$ -casein,  $\beta$ -casein,  $\kappa$ -casein or protein fragments, glycopeptides, phosphopeptides. The composition may optionally be further utilized for the prevention of hypercholesterolemia or bone mineral loss.

L22 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:728966 CAPLUS  
 DOCUMENT NUMBER: 143:179164  
 TITLE: UV-shielding cosmetics not containing regulated substances  
 INVENTOR(S): Matsumoto, Norichika; Tabuchi, Hiromi; Hirao, Kazuyuki; Enami, Namiko  
 PATENT ASSIGNEE(S): Asento Kaihatsu Y. K., Japan; Sanyo Yushi K. K.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005213171	A2	20050811	JP 2004-20168	20040128
PRIORITY APPLN. INFO.:			JP 2004-20168	20040128

AB Title cosmetics, which also prevent or alleviate UV-induced skin inflammation (no data), contain fats/oils containing  $\gamma$ -linolenic acid (glycerides), conjugated linoleic acid (glycerides), and fats/oils containing  $\alpha$ -linolenic acid (glycerides), squalene, vitamin A1, A2, E (acetate), and/or **carotene**. The ingredients may be included in or adsorbed on **cyclodextrin**. The cosmetics may also optionally contain folic acid, vitamin B1, B2, B12, K1, K2, nicotinic acid, rutin, daidzin, hesperidin, their aglycons, Phe, Tyr, Trp, vitamin B6, water, Na hyaluronate, ceramides, monoglycerides, glycerin, squalane, surfactants, antiseptic agents, TiO<sub>2</sub>, ZnO, Fe oxide, HCl, and/or NaOH. Thus, **cyclodextrin** and Phe were pulverized, mixed with TiO<sub>2</sub>, evening primrose oil, linoleic acid, tocopherol, glycerin, squalane, and Na hyaluronate, and emulsified with water to show 98% UV shielding effect.

L22 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:600558 CAPLUS  
 DOCUMENT NUMBER: 143:253966  
 TITLE: Natural **carotene** microcapsule and making method  
 INVENTOR(S): Liu, Liguofan  
 PATENT ASSIGNEE(S): Guangzhou Youbao Industry Co., Ltd., Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1545923	A	20041117	CN 2003-10112430	20031203
PRIORITY APPLN. INFO.:			CN 2003-10112430	20031203

AB The invention discloses a natural beta-**carotene** microcapsule and process for preparation, wherein the microcapsule comprises the following raw materials (by weight portion), natural beta-**carotene oil** solution 10-50, modified starch 20-32, beta **cyclodextrin** 5-18, maltodextrin 5-15, **oil** phase emulsifying agent 0.8-2, aqueous phase emulsifying agent 0.7-1.5, dispersing agent 5-15, preservative agent 0.5-1, anti-oxidizing agent 0.1-0.5.

L22 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:523236 CAPLUS  
DOCUMENT NUMBER: 143:48119  
TITLE: Reverse micelle formulations comprising one or more surfactant, a hydrophilic phase and lipophilic or hydrophobic compounds  
INVENTOR(S): Liang, Likan  
PATENT ASSIGNEE(S): Shire Laboratories, Inc., USA  
SOURCE: PCT Int. Appl., 38 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005053612	A2	20050616	WO 2004-US39567	20041124
WO 2005053612	A3	20050915		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG US 2005191343 A1 20050901 US 2004-995942 20041124 PRIORITY APPLN. INFO.: US 2003-525572P P 20031126 US 2004-541389P P 20040202 US 2004-566157P P 20040428				

AB The present invention is directed to reverse micellar formulations for the delivery of hydrophobic or lipophilic compds., particularly therapeutic compds. The formulations contains one or more non-ionic surfactants or a mixture of nonionic and ionic surfactants, a hydrophilic phase composed of one or more hydrophilic solvents and/or solubilizers and/ or aqueous media, and one or more therapeutically active, hydrophobic agents. The compns. optionally further contain P-glycoprotein inhibitors, absorption enhancers or promoters, tight junction modulators, lipid membrane mobilizers, and antioxidants. For example, fenofibrate reverse micelle systems containing both hydrophilic and surfactant-miscible solubilizers were prepared containing PEG-8-caprylic/capric glycerides 6 g, PEG-4 lauryl ether 3.7 g, PEG 400 0.15 g, water 0.15 g and fenofibrate 1 g.

L22 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:650049 CAPLUS  
DOCUMENT NUMBER: 141:194946  
TITLE: Antioxidative compositions for external use containing fullerenes  
INVENTOR(S): Ito, Shinobu; Matsubayashi, Kenji  
PATENT ASSIGNEE(S): Mitsubishi Corporation, Japan  
SOURCE: PCT Int. Appl., 80 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004067678	A1	20040812	WO 2004-JP699	20040127

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO  
 JP 2004250690 A2 20040909 JP 2004-19081 20040127  
 EP 1595936 A1 20051116 EP 2004-705495 20040127  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
 JP 2004269523 A2 20040930 JP 2004-45499 20040220  
 PRIORITY APPLN. INFO.: JP 2003-17866 A 20030127  
 JP 2003-86523 A 20030220  
 WO 2004-JP699 W 20040127

OTHER SOURCE(S): MARPAT 141:194946

AB As a tech. means of enabling the application of fullerenes and analogs thereof in various fields relating to biocompatibility to achieve a novel function (in particular, as a means of applying the same to cosmetics and formulated skin preps. for external use), an antioxidative composition comprises as the active ingredient at least one member selected from among fullerenes, fullerene-containing oxygen derivs. and the above-described fullerenes and fullerene-containing oxygen derivs. modified with an organic compound or included therein.

L22 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:574011 CAPLUS  
 DOCUMENT NUMBER: 141:190061  
 TITLE: Nucleic acid fruit vegetable nutrient product and its production process  
 INVENTOR(S): Yan, Huaiwei; Yi, Min; Yan, Huaipu; Yan, Huaijin; Yan, Huaizhang; Yan, Huaiqi  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 32 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1403024	A	20030319	CN 2002-133542	20020729
PRIORITY APPLN. INFO.:			CN 2002-133542	20020729

AB The title nutrient contains fresh fruit-vegetable juice or meals 20-90, composite nucleic acid and/or protein powder 0-30, vitamin-pigment complexes 0-1, antimicrobial composite 0-10, and composite fatty acid 0-5 part. The process comprises (1) selecting fresh fruit and vegetable, removing old stalk and mud sand, immersing in cold water for 20-40 min, adding CaO or Ca(OH)<sub>2</sub> for 10-20 min, washing, centrifugating, sorting, killing enzyme for 5-20 s, sterilizing for 1-5 s, treating by steam vacuum and activated carbon, cutting, milling, homogenizing till its particle size is 5-15  $\mu$ m, adding Ca lactate, killing enzyme for 3-10 min to obtain fresh juice, drying the juice at 60-80° to obtain powder; (2) putting malt extract-agar culture medium into a tube, sterilizing by 0.12 MPa steam for 5-20 min, cooling to below 30°, inoculating Penicillium and hydrolyzing DNA and RNA, culturing at 30° for 3 d, culturing in a eggplant bottle, adjusting pH to 6.0, sterilizing with 0.1 MPa steam for 15-20 min, cooling to below 30 min, fermenting at 25-80° under O<sub>2</sub>, discharging after the activity of enzyme is the highest, filtering, storing at below 10°, putting yeast, maize flower powder, melissa powder or other plant flower powder, immersing in water for 4-6 h, freezing at 10-20° for 40-60 min, defreezing at 80-90°, diluting, adding NaOH, stirring, degrading at 63-65° for 0.5-1 h, cooling to 45-55°, enzymolyzing for 2 h g in the presence of proteinase, heating to 96-100°, keeping for 3-6 min, cooling to 10-20°, adjusting pH to 6-6.5, concentrating, drying to obtain composite protein-nucleic acid;. (3) Immersing chlorophyll into ethanol, dissolving **carotenoid** into vegetable **oil**, adding methylcellulose, removing ethanol by distillation; (4) mixing **cyclodextrin**, lysozyme and garlic **oil**, drying at below 50°, pulverizing to obtain antimicrobial composite; (5) mixing linoleic acid,  $\alpha$ -linolenic acid and  $\gamma$ -linolenic ac; and (6) mixing the raw material to obtain the product. The product can be used as additives of food, drinks, flavoring agent, flavoring agent, medicine, etc.

L22 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:533984 CAPLUS

DOCUMENT NUMBER: 141:76788  
 TITLE: Taxane-based compositions and methods of use  
 INVENTOR(S): Zhang, Kai; Smith, Gregory A.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 18 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004127551	A1	20040701	US 2002-330804	20021227
PRIORITY APPLN. INFO.:			US 2002-330804	20021227

AB Taxane-based compns. and methods of using the same to achieve target blood levels of a taxane in a mammal, e.g., to treat taxane-responsive malignant and non-malignant diseases are described. Compns. of the invention exhibit long-term stability and overall palatability. Also disclosed are methods for using the compns. as anal. tools for pharmacokinetic studies. For example, a solution was prepared containing (weight/volume) paclitaxel 1.20%, vitamin E TPGS 4.00%, propylene glycol 40.00%, ascorbyl palmitate 0.50%, dl- $\alpha$ -tocopherol 0.50%, and dehydrated alc. to 100 mL. The solution was stable showing minimal levels of paclitaxel degradation products. In addition, impurities were less than 3.5% after as long as 6 mo of incubation.

L22 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:473124 CAPLUS  
 DOCUMENT NUMBER: 141:42908  
 TITLE: Coated **carotenoid cyclodextrin** complexes  
 INVENTOR(S): Reuscher, Helmut; Kagan, Daniel I.; Madhavi, Doddabele L.  
 PATENT ASSIGNEE(S): Bioactives LLC, USA; Wacker Biochem Corp.  
 SOURCE: U.S. Pat. Appl. Publ., 7 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004109920	A1	20040610	US 2002-309999	20021204
PRIORITY APPLN. INFO.:			US 2002-309999	20021204

AB Coated **cyclodextrin** and **carotenoid** complexes are stable against oxidation and exhibit higher biouptake than **oil**-based, lipophile based, and micellar **carotenoid** compns. The coating may be an **oil**, or a naturally occurring, optionally derivatized polymer or a pharmaceutically acceptable synthetic polymer. A **lutein- $\gamma$ -cyclodextrin** complex was prepared and coated with soy **oil**.

L22 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:551372 CAPLUS  
 DOCUMENT NUMBER: 139:106487  
 TITLE: Taxane based compositions containing solubilizers  
 INVENTOR(S): Zhang, Kai; Smith, Gregory A.  
 PATENT ASSIGNEE(S): Ivax Research, Inc., USA  
 SOURCE: PCT Int. Appl., 48 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003057208	A1	20030717	WO 2002-US41632	20021227
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				

KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2471572 AA 20030717 CA 2002-2471572 20021227  
 AU 2002360816 A1 20030724 AU 2002-360816 20021227  
 EP 1461029 A1 20040929 EP 2002-796098 20021227

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

CN 1615130 A 20050511 CN 2002-827386 20021227  
 JP 2005525310 T2 20050825 JP 2003-557566 20021227

PRIORITY APPLN. INFO.: US 2001-344921P P 20011228  
 WO 2002-US41632 W 20021227

AB Disclosed are taxane-based compns. and methods of using the same to achieve target blood levels of a taxane in a mammal, e.g., to treat taxane-responsive malignant and non-malignant diseases. Compns. of the invention exhibit long-term stability and overall palatability. Also disclosed are methods for using the compns. as anal. tools for pharmacokinetic studies. Thus, a formulation contained paclitaxel 1.20, Vitamin E TPGS 40.00, propylene glycol 40.00, ascorbyl palmitate 0.50, DL- $\alpha$ -tocopherol 0.50, and alc. qs to 100 mL.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN.

ACCESSION NUMBER: 2003:282273 CAPLUS  
 DOCUMENT NUMBER: 138:282781  
 TITLE: Microbicidal formulation comprising essential oils or their derivatives  
 INVENTOR(S): Ben-Yehoshua, Shimshon  
 PATENT ASSIGNEE(S): Israel  
 SOURCE: PCT Int. Appl., 56 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003028451	A2	20030410	WO 2002-IL808	20021003
WO 2003028451	A3	20040318		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2462511	AA	20030410	CA 2002-2462511	20021003
EP 1434486	A2	20040707	EP 2002-775184	20021003
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
JP 2005504102	T2	20050210	JP 2003-531804	20021003
NZ 532165	A	20050930	NZ 2002-532165	20021003
ZA 2004002693	A	20050308	ZA 2004-2693	20040406
NO 2004001791	A	20040702	NO 2004-1791	20040503
US 2004234662	A1	20041125	US 2004-491491	20040624
PRIORITY APPLN. INFO.:			IL 2001-145767 A	20011004
			WO 2002-IL808 W	20021003

AB Microbicidal aqueous formulation comprise: (i) an effective amount of at least one essential oil component, or derivs. thereof, said derivs. thereof obtained by exposure to light or by oxidation, or mixts. thereof; and (ii) at least one addnl. stabilizer selected from the group consisting of ethanol in an amount of from 10% to about 50%, an emulsifier, an antioxidant, or an encapsulating agent. The invention is further directed to a method for inhibiting microbial development using said microbicidal aqueous formulation.

L22 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:327443 CAPLUS  
 DOCUMENT NUMBER: 137:324416  
 TITLE: Processing and quality evaluation of low cholesterol egg products

AUTHOR(S): Chiang, Yea-Ling; Yang, Sheng-Chin  
 CORPORATE SOURCE: Department of Food and Nutrition, Providence  
 University, Shalu, 433, Taiwan  
 SOURCE: Taiwan Nongye Huaxue Yu Shipin Kexue (2001), 39(2),  
 108-116  
 CODEN: TNHKEW; ISSN: 1605-2471  
 PUBLISHER: Chinese Agricultural Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese

AB The addition of 5.0%  $\beta$ - **carotene** increased the brightness and yellowness of low cholesterol scrambled egg, low cholesterol mayonnaise and low cholesterol sponge cake made from reduced cholesterol egg yolk (CREY) treated with  $\beta$ - **cyclodextrin**, and these results were similar to those for the original egg yolk products. Low cholesterol egg products made from CREY or modified CREY could reduce by 80% the cholesterol contents as compared to those made from EY. Low cholesterol sponge cake had lower fat content and higher swelling volume than sponge cake. The addition of 1% xanthan gum and 0.5% HLB11 emulsifier in modified low cholesterol scrambled egg and low cholesterol sponge cake resulted in better sensory results. Adding 4.0% corn **oil** and 0.5% HLB11 emulsifier in modified low cholesterol mayonnaise apparently increased the stability and viscosity of the mayonnaise, which made the product acceptable in sensory evaluation. In general, the results of this research showed that making low cholesterol egg products with modified CREY is feasible from the standpoint of processing technol.

L22 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:730546 CAPLUS  
 DOCUMENT NUMBER: 135:278040  
 TITLE: Taxane-based compositions  
 INVENTOR(S): Zhang, Kai; Smith, Gregory A.; Gutierrez-Roca, Jose C.  
 PATENT ASSIGNEE(S): Baker Norton Pharmaceuticals, Inc., USA  
 SOURCE: PCT Int. Appl., 40 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001072299	A1	20011004	WO 2001-US9382	20010323
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2404370	AA	20011004	CA 2001-2404370	20010323
EP 1315484	A1	20030604	EP 2001-920699	20010323
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2003528141	T2	20030924	JP 2001-570260	20010323
PRIORITY APPLN. INFO.:			US 2000-191802P	P 20000324
			WO 2001-US9382	W 20010323
AB	Taxane-based compns. and methods of using the same to achieve target blood levels of a taxane in a mammal, e.g., to treat taxane-responsive malignant and non-malignant diseases, are described. Compns. comprise a taxane, a carrier, a co-solubilizer, and a stabilizer in a form suitable for oral administration to a mammal and they exhibit long-term stability and overall palatability. Methods for using taxane-based compns. as anal. tools for pharmacokinetic studies are also disclosed. For example, a solution was prepared containing Paclitaxel 12 mg, vitamin E TPGS 400.00 mg, propylene glycol 400.00 mg, ascorbyl palmitate 5.0 mg, dl- $\alpha$ -tocopherol 5.0 mg and d Dehydrated alc. to 1.0 mL.			
REFERENCE COUNT:	4	THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT		

L22 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:520522 CAPLUS  
 DOCUMENT NUMBER: 136:330410  
 TITLE: A Plackett-Burnam screening design directs the efficient formulation of multicomponent DRV liposomes

AUTHOR(S): Loukas, Y. L.  
 CORPORATE SOURCE: Panepistimiopolis Zografou, School of Pharmacy,  
 Department of Pharmaceutical Chemistry, University of  
 Athens, Athens, 157 71, Greece  
 SOURCE: Journal of Pharmaceutical and Biomedical Analysis  
 (2001), 26(2), 255-263  
 CODEN: JPBADA; ISSN: 0731-7085  
 PUBLISHER: Elsevier Science B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB A computer-based technique was applied for the optimization of recently  
 described multicomponent protective liposomal formulations. These  
 formulations contain riboflavin in either free form or complexed with  
 $\gamma$ - **cyclodextrin** as a model drug, sensitive to photochem.  
 degradation, as well as various light absorbers and antioxidants incorporated  
 into the lipid bilayer and/or the aqueous phase of liposomes. During the  
 liposomal preparation, a series of 11 factors were isolated as important to  
 affect their effectiveness as stabilization systems. These factors were  
 related, first, to the composition of liposomes and, second, to variations  
 during the preparation procedure. The Plackett-Burnam design described in this  
 study was applied for the isolation of the significant factors in order to  
 concentrate more on them. The stabilization ratio of the vitamin was the  
 response variable of the system to be optimized. In order to assure the  
 presence of the examined components in liposomes, the entrapment values were  
 calculated for all the materials, either spectrophotometrically or using  
 second-order derivative spectrophotometry. The optimum formulation should be  
 characterized from the higher protection of the drug.  
 REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:323006 CAPLUS  
 DOCUMENT NUMBER: 135:76082  
 TITLE: Encapsulated **carotenoid** preparations from  
 high-**carotenoid** canola **oil** and  
**cyclodextrins** and their stability  
 AUTHOR(S): Basu, Hemendra N.; Del Vecchio, Anthony  
 CORPORATE SOURCE: Calgene, Inc., A Monsanto Company, Mt. Prospect, IL,  
 60056, USA  
 SOURCE: Journal of the American Oil Chemists' Society (2001),  
 78(4), 375-380  
 CODEN: JAOCA7; ISSN: 0003-021X  
 PUBLISHER: AOCs Press  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB **Cyclodextrin** complexes were prepared using 1:1 and 1:0.5 molar  
 ratios of **cyclodextrins** and high-**carotenoid** canola  
**oil**.  $\beta$ - **Cyclodextrin** formed powdered complexes with a  
 molar ratio of 1:0.5, **cyclodextrin**/high-**carotenoid**  
 canola **oil**. With a 1:1 molar ratio, the complex was clumpy. In  
 the case of  $\alpha$ - **cyclodextrin**, powdery complexes were formed  
 with either 1:1 or 1:0.5 molar ratio. The triglyceride **oil**  
 present in the complexes varied between 28.87 and 48.2%, and there was no  
 segregation of the triglyceride **oil** during complex formation.  
 The stability of **carotenoids** and tocopherols was also the same  
 in brown bottles whether the complexes were kept under nitrogen or under  
 oxygen. In clear glass vials, the amts. of  $\alpha$ - and  $\beta$ -  
**carotene** went down, but there was very little change in  
 tocopherols. With respect to sterols, more than 90% of the sterols  
 present in the degummed **oil** were present in the  $\alpha$ -  
**cyclodextrin** complexes, thereby indicating a higher affinity of  
 the sterols in the **cyclodextrin** cavity.  
 REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1999:49723 CAPLUS  
 DOCUMENT NUMBER: 130:85914  
 TITLE: Topical emulsifiable triphase composition containing  
 combination of **cyclodextrin** and amorphous  
 silica  
 INVENTOR(S): Jeanjean, Michel; Gilardi, Sandrine  
 PATENT ASSIGNEE(S): Pierre Fabre Dermo Cosmetique S. A., Fr.  
 SOURCE: Fr. Demande, 16 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE: Patent

LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2763506	A1	19981127	FR 1997-6103	19970520
FR 2763506	B1	19990813		

PRIORITY APPLN. INFO.: FR 1997-6103 19970520

AB A topical emulsifiable triphase composition contains a biphasic lipophilic-hydrophilic liq. phase and a solid phase comprising a combination of **cyclodextrin** and amorphous silica. A topical composition contained  $\beta$ - **cyclodextrin** 1.2, amorphous silica 004, lactose 0.8 in the powder phase, grape seed **oil**, alpha tocopherol acetate, beta **carotene**, melaleuca **oil**, volatile silicone, and isohexadecane q.s. in the lipophilic phase; D-panthenol, methionine, natural peptide, vitamin pp, vitamin B6, zinc sulfate, alc., and water q.s. in the hydrophilic phase.

L22 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:735042 CAPLUS  
 DOCUMENT NUMBER: 130:7287  
 TITLE: Process for preparing decolorized **carotenoid** -**cyclodextrin** complexes  
 INVENTOR(S): Sikorski, Christopher; Schwartz, Joel L.; Shklar, Gerald  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S., 14 pp., Cont.-in-part of U.S. Ser. No. 339,018, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5834445	A	19981110	US 1995-552374	19951103
			US 1989-392857	B2 19890811
			US 1990-469171	B1 19900124
			US 1991-708130	B1 19910529
			US 1991-741203	B1 19910730
			US 1992-860201	B2 19920326
			US 1992-947067	B2 19920918
			US 1994-339018	B2 19941114

AB Complexes of  $\beta$ - **carotene** with **cyclodextrin** are described, having reduced color intensity and a shift of color to tones more neutral than the deep red of uncomplexed  $\beta$ - **carotene**. When these complexes are added to topical compns. such as typical skin cream bases in amts. up to 1.0%  $\beta$ - **carotene** w/v, the result is a cream having a pinkish to beige color which is cosmetically acceptable, as opposed to the mustard orange to red color seen in creams containing like amts. of uncomplexed  $\beta$ - **carotene**. Thus, 50 mg of  $\beta$ - **carotene** were mixed thoroughly with 50 mg of  $\beta$ - **cyclodextrin**, then 1 mL of distilled water was added to the mixture to obtain a composition with light brown color and a watery texture. Fifty milligrams of Vitamin E succinate were then added to this composition, followed by addition of 1 mL of glycerin and 150 mg of gelatin. These addns. resulted in a composition with a light brown color and a somewhat thicker texture.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:293427 CAPLUS  
 DOCUMENT NUMBER: 129:8597  
 TITLE: Embedding and encapsulation of controlled release particles  
 INVENTOR(S): Van Lengerich, Bernhard H.  
 PATENT ASSIGNEE(S): Van Lengerich, Bernhard H., USA  
 SOURCE: PCT Int. Appl., 63 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9818610	A1	19980507	WO 1997-US18984	19971027
W: AU, CA, JP, NO, PL, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2269806	AA	19980507	CA 1997-2269806	19971027
CA 2269806	C	20060124		
AU 9749915	A1	19980522	AU 1997-49915	19971027
AU 744156	B2	20020214		
EP 935523	A1	19990818	EP 1997-912825	19971027
EP 935523	B1	20040929		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002511777	T2	20020416	JP 1998-520558	19971027
EP 1342548	A1	20030910	EP 2003-10031	19971027
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 277739	E	20041015	AT 1997-912825	19971027
NO 9902036	A	19990428	NO 1999-2036	19990428
PRIORITY APPLN. INFO.:				
			US 1996-29038P	P 19961028
			US 1997-52717P	P 19970716
			EP 1997-912825	A3 19971027
			WO 1997-US18984	W 19971027

AB Controlled release, discrete, solid particles which contain an encapsulated and/or embedded component such as a heat sensitive or readily oxidizable pharmaceutically, biol., or nutritionally active component are continuously produced without substantial destruction of the matrix material or encapsulant. A release-rate controlling component is incorporated into the matrix to control the rate of release of the encapsulant from the particles. The addnl. component may be a hydrophobic component or a high water binding capacity component for extending the release time. The plasticizable matrix material, such as starch, is admixed with at least one plasticizer, such as water, and at least one release-rate controlling component under low shear mixing conditions to plasticize the plasticizable material without substantially destroying the at least one plasticizable material and to obtain a substantially homogeneous plasticized mass. The plasticizer content is substantially reduced and the temperature of the plasticized mass is substantially reduced prior to admixing the plasticized mass with the encapsulant to avoid substantial destruction of the encapsulant and to obtain a formable, extrudable mixture. The mixture is extruded through a die without substantial or essentially no expansion and cut into discrete, relatively dense particles. Release properties may also be controlled by precoating the encapsulant and/or coating the extruded particles with a film-forming component. An example of encapsulation of acetylcysteine is given using starch, polyethylene, glycerol monostearate, and vegetable oil.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:696286 CAPLUS

DOCUMENT NUMBER: 127:322844

TITLE: 2(k - p) Fractional factorial design via fold over: application to optimization of novel multicomponent vesicular systems

AUTHOR(S): Loukas, Yannis L.

CORPORATE SOURCE: Centre for Drug Delivery Research, School of Pharmacy, University of London, London, WC1N 1AX, UK

SOURCE: Analyst (Cambridge, United Kingdom) (1997), 122(10), 1023-1027

CODEN: ANALAO; ISSN: 0003-2654

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A computer-based technique based on a 2(k - p) fractional factorial design was applied for the optimization of recently described multicomponent protective liposomal formulations. These formulations contain riboflavin (vitamin B2) as a model, photosensitive drug, in addition to oil Red O, deoxybenzone, oxybenzone and  $\beta$ -carotene as oil-soluble light absorbers and antioxidants incorporated into the lipid bilayer, and sulisobenzene as a water-soluble light absorber incorporated into the aqueous phase of liposomes. The presence or absence of these five different light absorbers in multilamellar liposomes containing the vitamin free or complexed with  $\gamma$ -cyclodextrin comprised the six factors of the system, each one examined at two levels. The stabilization ratio of the vitamin and its percentage entrapment in

liposomes were the two response variables of the system to be optimized. The entrapment values were calculated for all the materials, either spectrophotometrically, using second-order derivative spectrophotometry, or fluorimetrically. The response variables were predicted by multiple regression equations comprising combinations of the six formulation factors. Higher entrapment and higher protection for the drug should characterize the optimum formulation.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:565898 CAPLUS

DOCUMENT NUMBER: 127:166694

TITLE: A study of bioavailability of different forms of synthetic  $\beta$ -carotene in volunteers

AUTHOR(S): Spirichev, V. B.; Yakushina, L. M.; Charitonchik, L. A.; Isaeva, V. A.; Shkarina, T. N.; Malachova, E. A.; Poznanskaya, A. A.

CORPORATE SOURCE: Nutrition Institute, Russian Academy of Med. Sciences, Moscow, Russia

SOURCE: Voprosy Pitaniya (1996), (6), 22-26  
CODEN: VPITAR; ISSN: 0042-8833

PUBLISHER: AO "Nutritek"

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The concns. of  $\beta$ -carotene were determined by HPLC in blood serum of 30 healthy men and women aged 17-50 yr in May-June 1990. The concns. ranged 3.3-29.5, with an average of  $12.0 \pm 1.2$   $\mu\text{g}/100$  mL. The concns. of total carotenoids, as determined by a spectrophotometric method, were 58.0-215.0, with an average of  $120.5 \pm 7.5$   $\mu\text{g}/100$  mL. The levels of total carotenoids were 10 times higher than the levels of  $\beta$ -carotene detected by HPLC. The levels of carotenoids in blood serum detected by the two methods were pos. correlated ( $r = 0.8$ ). Single oral doses of 25 mg synthetic  $\beta$ -carotene in 3 different forms (powder with cyclodextrin, 30% microcryst. suspension in vegetable oil, or 10% aqueous soluble form produced by Hoffman-La Roche) increased the  $\beta$ -carotene concns. in blood serum with a maximum within 24-48 h. The bioavailability of  $\beta$ -carotene from the cyclodextrin/ $\beta$ -carotene preparation, as determined by absolute increases of  $\beta$ -carotene concns. in serum, was the lowest among the 3 forms. The bioavailability of  $\beta$ -carotene from the 30% oil suspension and the 10% aqueous soluble was almost the same. The retinol levels in blood serum remained in the normal range, thus were not affected by the intake of  $\beta$ -carotene.

L22 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:452708 CAPLUS

DOCUMENT NUMBER: 125:113354

TITLE: Fat substitutes containing water soluble beta-carotene

INVENTOR(S): Fortier, Nancy E.

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: U.S., 6 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5532009	A	19960702	US 1995-473889	19950607
CA 2223780	AA	19961219	CA 1996-2223780	19960423
CA 2223780	C	20010612		
WO 9639870	A1	19961219	WO 1996-US5560	19960423
W: AU, BR, CA, CN, JP, MX				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9655641	A1	19961230	AU 1996-55641	19960423
AU 708653	B2	19990812		
EP 831727	A1	19980401	EP 1996-913005	19960423
EP 831727	B1	20010613		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
CN 1190333	A	19980812	CN 1996-195420	19960423
CN 1066027	B	20010523		
BR 9609231	A	19990511	BR 1996-9231	19960423

JP 11506922	T2	19990622	JP 1996-500481	19960423
ES 2157438	T3	20010816	ES 1996-913005	19960423
PRIORITY APPLN. INFO.:			US 1995-473889	A 19950607
			WO 1996-US5560	W 19960423

AB The present invention relates to non-absorbable, non-digestible fat compns. fortified with a water soluble **carotenoid/cyclodextrin** complex. The compns. are useful as fat substitutes in food and pharmaceutical compns. The **carotenoid** is readily bioavailable and resists partitioning into the fat/fat-like phase.

L22 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:874218 CAPLUS  
 DOCUMENT NUMBER: 123:296447  
 TITLE: Study of bioavailability and pharmacodynamics of various forms of  **$\beta$ -carotene** in volunteers  
 AUTHOR(S): Yakushina, L. M.; Malakhova, E. A.; Shkarina, T. N.; Poznanskaya, A. A.; Spirichev, V. B.  
 CORPORATE SOURCE: Inst. Nutrition, Russian Academy Medical Sci., Moscow, Russia  
 SOURCE: Voprosy Meditsinskoi Khimii (1995), 41(4), 36-41  
 CODEN: VMDKAM; ISSN: 0042-8809  
 PUBLISHER: Meditsina  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

AB The bioavailability of  **$\beta$ -carotene** from a water-soluble formulation based on **cyclodextrin** (Cyclocar tablets) vs. oily formulation was studied in volunteers given a single dose of 25 mg. The concns. of  **$\beta$ -carotene** and major **carotenoids** were measured in the blood serum during the experiment by HPLC. The maximum content of  **$\beta$ -carotene** in the serum was attained 24-30 and 30-48 h after oily formulations and Cyclocar and were  $48.0 \pm 7.7$  and  $28.1 \pm 3.6$  mg/dL, resp. The rate of  **$\beta$ -carotene** utilization from Cyclocar was 2.2 times less than that from the **oil** paste. Besides,  **$\beta$ -carotene** absorbed from these oily drugs retained in the blood serum for longer period than that from Cyclocar.

L22 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:629913 CAPLUS  
 DOCUMENT NUMBER: 123:51286  
 TITLE: Characterization and Photoprotection Studies of a Model  **$\gamma$ -Cyclodextrin**-Included Photolabile Drug Entrapped in Liposomes Incorporating Light Absorbers  
 AUTHOR(S): Loukas, Yannis L.; Jayasekera, Pramukh; Gregoriadis, Gregory  
 CORPORATE SOURCE: School of Pharmacy, University of London, London, WC1N 1AX, UK  
 SOURCE: Journal of Physical Chemistry (1995), 99(27), 11035-40  
 CODEN: JPCHAX; ISSN: 0022-3654  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Riboflavin (R), a photosensitive model drug, was included into  **$\gamma$ -cyclodextrin** ( $\gamma$ CD) and the complex formed (R: $\gamma$ CD) characterized by NMR and differential scanning calorimetry. R or R: $\gamma$ CD was entrapped into the aqueous phase of liposomes by the dehydration-rehydration procedure (DRV liposomes) or the classical method (MLV liposomes) both of which produce multilamellar vesicles. Liposomes, composed of egg phosphatidylcholine and equimolar cholesterol, were made to contain in a number of formulations one or more of the lipid-soluble light absorbers **oil** red O, oxybenzone, and dioxybenzone and, in some cases, the antioxidant  **$\beta$ -carotene**, all incorporated into the bilayer structure. Exposure of R-containing liposomal formulations to UV light revealed various degrees of photoprotection depending on the type of liposomes used, whether or not the vitamin was included in  $\gamma$ CD, the identity of light absorbers as well as the presence of  **$\beta$ -carotene**. Optimal photoprotection (267-fold stabilization compared to free R in solution) under the conditions described, was obtained when the R: $\gamma$ CD complex was entrapped in DRV liposomes incorporating all lipid-soluble absorbers and  **$\beta$ -carotene**.

L22 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:365120 CAPLUS  
 DOCUMENT NUMBER: 122:169914  
 TITLE: Novel liposome-based multicomponent systems for the

protection of photolabile agents  
 AUTHOR(S): Loukas, Yannis L.; Jayasekera, Pramukh; Gregoriadis, Gregory  
 CORPORATE SOURCE: Centre for Drug Delivery Research, School of Pharmacy, University of London, 29-39 Brunswick Square, London, WC1N 1AX, UK  
 SOURCE: International Journal of Pharmaceutics (1995), 117(1), 85-94  
 CODEN: IJPHDE; ISSN: 0378-5173  
 PUBLISHER: Elsevier  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB A photosensitive drug (riboflavin) was entrapped as such or in the form of  $\beta$ - or  $\gamma$ - **cyclodextrin** complexes into the aqueous phase of multilamellar dehydration-rehydration vesicles (DRV liposomes) made of equimolar egg phosphatidylcholine or dipalmitoylphosphatidylcholine and cholesterol. Riboflavin-containing DRV were prepared in the absence or presence of one or more of the lipid-soluble UV absorbers **oil** red O, oxybenzone and dioxybenzone (entrapped into the lipid phase) and the water-soluble sulisobenzene (entrapped in the aqueous phase of liposomes together with riboflavin). In some expts., lipid-soluble absorbers were supplemented with the antioxidant  $\beta$ - **carotene**. Entrapment values for free (41-47%) and complexed (19-23%) riboflavin were estimated fluorimetrically with addnl. data from NMR studies confirming that the complexes were entrapped as intact entities. Entrapment values for each of the UV light lipid-soluble absorbers (79-98%) and  $\beta$ - **carotene** (78 and 88%) were estimated by the use of the second-order derivative of their UV spectra to circumvent interference from overlapping absorption spectra of the other agents, when present. A number of conditions of entrapment were found to reduce values, for instance co-entrapment of sulisobenzene together with the vitamin in the case of riboflavin and, for all other materials, the absence (or reduced content) of cholesterol in DRV or certain variations in their manufacture. Exposure of a variety of riboflavin-containing DRV preps. to UV light revealed optimal protection with a formulation containing the  $\beta$ - **cyclodextrin** complex of the vitamin, all three lipid-soluble light absorbers and  $\beta$ - **carotene**, increasing the half-life of riboflavin 266-fold. Results suggest that liposome-based multicomponent systems could be developed for the protection of photolabile agents in therapeutics and other uses.

L22 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:506672 CAPLUS  
 DOCUMENT NUMBER: 121:106672  
 TITLE: Ellagic acid glycosides and their manufacture with **cyclodextrin** synthetase  
 INVENTOR(S): Sakakibara, Tatsuya; Nakamura, Kazuo; Mizusawa, Kyoshi  
 PATENT ASSIGNEE(S): Kikkoman Corp, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05331183	A2	19931214	JP 1992-161904	19920529
JP 3024864	B2	20000327		

PRIORITY APPLN. INFO.: JP 1992-161904 19920529

AB Ellagic acid glycosides I (n = 1-6), which have high water solubility and are useful as antioxidants for edible fats and **oils**, antimutagens, antitumors, etc., are manufactured by treating ellagic acid with **cyclodextrin** synthetase in presence of sugar donors. Ellagic acid, arginine, and  $\alpha$ - **cyclodextrin** in H<sub>2</sub>O were treated with **Cyclodextrin** Glucanotransferase "Amano" at pH 7.5 and 50° for 15 h to produce ellagic acid glycosides. Addition of 10  $\mu$ M ellagic acid 4-O- $\alpha$ -D-glucopyranoside inhibited decomposition of  $\beta$ - **carotene**.

L22 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:465560 CAPLUS  
 DOCUMENT NUMBER: 121:65560  
 TITLE: Process for producing **oil**-in-water type **beta-carotene**  
 INVENTOR(S): Lu, Ling; Yuan, Sheng; Qin, Huailan; et al.  
 PATENT ASSIGNEE(S): Nanjing Normal University, Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1079218	A	19931208	CN 1993-110751	19930408
CN 1038220	B	19980506		

PRIORITY APPLN. INFO.: CN 1993-110751 19930408

AB The title process for making 0.5-10% oil-in-water type involves mixing  $\beta$ -carotene (solution in oil) 20-25, an emulsifier higher than HLB 3-8, water soluble gel 20-30, an emulsifier lower than HLB 5-8, water 50-150, and sugar 40-50 parts at 20-100° (undergoing emulsification process), drying the resulting emulsion, and making granules. E.g., a mixture of CMC-Na 20, Tween 80 5, and water 150 parts was heated at 60-80° with stirring, 20 parts 20%  $\beta$ -carotene in oil and 8 parts Span 80 were added, and the resulting mixture was emulsified and then mixed at 1:1 ratio with com. sucrose to give 5%  $\beta$ -carotene oil-in-water granules.

L22 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:210678 CAPLUS  
 DOCUMENT NUMBER: 116:210678  
 TITLE: Use of mechanochemical activation to modify properties of bioactive compounds  
 AUTHOR(S): Chuev, V. P.; Kameneva, O. D.; Chikalo, T. M.; Nikitchenko, V. M.  
 CORPORATE SOURCE: Union Vit. Res. Inst., Belgorod, USSR  
 SOURCE: Sibirskii Khimicheskii Zhurnal (1991), (5), 156-7  
 CODEN: SKZHEC; ISSN: 0002-3426  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB To improve water-solubility and oxidation stability of oil-soluble vitamins A, E, K,  $\beta$ -carotene and other poorly soluble bioactive compds. (BAC)-cumarin and riboflavin derivs., the dispersion formation of mol. complexes (entropy-frozen systems) with dextran, polyvinyl-pyrrolidone,  $\beta$ -cyclodextrin (CD) and other filling materials have been studied under mech. activation (MA) of binary mixts. Mechanochem. activation in production of mol. complexes is a more promising method compared to the others, particularly for inclusion complexes, dispersion of sep. constituents and their mixing under these conditions are not associated either with the mech. cracking of organic mols. or with the modification of BAC physico-chemical properties.

L22 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:172730 CAPLUS  
 DOCUMENT NUMBER: 116:172730  
 TITLE: Manufacture of handmade Japanese noodles containing fruit juices and cyclodextrin  
 INVENTOR(S): Sumioka, Sohei  
 PATENT ASSIGNEE(S): Enshu Tenobe Seimen K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 2 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03266951	A2	19911127	JP 1990-65615	19900316

PRIORITY APPLN. INFO.: JP 1990-65615 19900316

AB Handmade Japanese noodles are manufactured by kneading materials containing flour or buckwheat flour, NaCl, vegetable oils, and optional vinegar (for raw noodles) with (i) orange juice, carotene, and cyclodextrin (I) or (ii) grape juice, purple yam or other potatoes with similar effect to the yam, and I. The noodles show the color of the fruit and fruit-like flavor.

L22 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:19966 CAPLUS  
 DOCUMENT NUMBER: 116:19966

TITLE: Separation of cholesterol from edible fats by using starch-containing products  
 AUTHOR(S): Schlimme, E.; Lorenzen, P. C.; Precht, D.  
 CORPORATE SOURCE: Inst. Chem. Phys., Bundesanst. Milchwforsch., Kiel, Germany  
 SOURCE: Kieler Milchwirtschaftliche Forschungsberichte (1991), 43(2), 149-59  
 CODEN: KMWFAF; ISSN: 0023-1347  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 AB Cholesterol was removed from butter **oil** (or a sunflower **oil** model) by adding 1 g  $\beta$ - **cyclodextrin**, dextrin, potato starch, or wheat flour to a 10 g sample, stirring at 40 or 60° for 3 h, adding water, stirring another 3 h, crystallizing the butter **oil**, and separating the aqueous phase. Cholesterol reduction in the butter **oil** was 34.4% for  $\beta$ - **cyclodextrin** and 15.6% for starch; dextrin and wheat flour were less effective. No addnl. removal occurred at 60° as compared with 40°. The process also removes aroma compds. and  $\beta$ - **carotene** so that organoleptic quality is decreased.

L22 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1977:516647 CAPLUS  
 DOCUMENT NUMBER: 87:116647  
 TITLE: Antideliquescence agents for organic compounds  
 INVENTOR(S): Nawata, Yoritaka; Yamamoto, Katsuya; Sano, Mamoru  
 PATENT ASSIGNEE(S): Oosawa, Takashi, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 52012684	A2	19770131	JP 1975-88719	19750718
JP 58044349	B4	19831003		

PRIORITY APPLN. INFO.: JP 1975-88719 A 19750718

AB Fondant and sugars are prevented from deliquescing by adding 1-30% by weight of clathrate compds. consisting of 20-80 parts of cyclic dextrins and 20-80 parts of fat by weight Cyclic dextrins included  $\alpha$ - **cyclodextrin**,  $\beta$ - **cyclodextrin** [7585-39-9], and fats include mono-, di-, triglycerides, phosphatides, and **carotenoids**. Thus, 5 mL of water and 5 g soybean **oil** were mixed with 10 g  $\beta$ - **cyclodextrin** to give a clathrate compound Granular sugar, 300 g, was mixed with the clathrate compound, dried and then powdered Sponge cake smeared with this powder was held at 30° and 80% relative humidity for 24 h without any change. These antideliquescence agents have no effect on inorg. substances.

L23 ANSWER 1 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:1292347 CAPLUS  
 DOCUMENT NUMBER: 144:35384  
 TITLE: Fermentative production of fine chemicals from starch hydrolyzates  
 INVENTOR(S): Pompejus, Markus; Freyer, Stephan; Lohscheidt, Markus; Zelder, Oskar; Boy, Matthias  
 PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany  
 SOURCE: PCT Int. Appl., 96 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005116228	A2	20051208	WO 2005-EP5728	20050527
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 102004026152	A1	20051215	DE 2004-102004026152	20040528
PRIORITY APPLN. INFO.: DE 2004-102004026152A 20040528				
AB The inventions provides processes for the production of a variety of fermentation products from sugars obtained from starch containing grains. In particular, the inventions provides for the production of monosaccharides from grains such as corn, wheat or rye by enzymic treatment of meal derived from one of the above grains. The obtained carbohydrates then can serve as the carbon sources for the production of fermentation products such as amino acids, enzymes or vitamins.				

L23 ANSWER 2 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:951863 CAPLUS  
 TITLE: Study on the inclusion compound of  $\beta$ -carotene with  $\beta$ -cyclodextrin  
 AUTHOR(S): Zhou, Yi-ping; Yan, Chun-Li; Xiu, Zhi-long  
 CORPORATE SOURCE: Department of Biological Science and Technology, School of Environmental and Biological Science and Technology, Dalian University of Technology, Dalian, 116024, Peop. Rep. China  
 SOURCE: Jingxi Yu Zhuanyong Huaxuepin (2005), 13(13), 24-27  
 CODEN: JYZHA7; ISSN: 1008-1100  
 PUBLISHER: Jingxi Yu Zhuanyong Huaxuepin Bianjibu  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 AB Taking the inclusion rate of  $\beta$ -carotene as a criterion, inclusion compound of  $\beta$ -carotene with  $\beta$ -cyclodextrin via ultrasonic method was prepared The optimum conditions determined by single factor and orthogonal design were as follows: the ultrasonic power was 300W with duration time of 40 min; n( $\beta$ -carotene): n( $\beta$ -cyclodextrin) = 1:4. The inclusion compound was confirmed by micrograph and X-RD. The experiment results showed that the retaining rate of  $\beta$ -carotene increased by 25.5% in inclusion compound, compared with a controlled sample.

L23 ANSWER 3 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:284030 CAPLUS  
 DOCUMENT NUMBER: 142:330269  
 TITLE: Assay solution compositions and methods in high throughput screening for effectors of G protein-coupled receptors  
 INVENTOR(S): Fang, Ye; Ferrie, Ann M.; Hong, Yulong; Pai, Sadashiva K.; Peng, Jinlin; Webb, Brian L.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 16 pp.  
 CODEN: USXXCO

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005069953	A1	20050331	US 2003-676351	20030930
PRIORITY APPLN. INFO.:			US 2003-676351	20030930

AB Buffered assay solns. for performing either binding or functional assays on arrays G protein-coupled receptors, and methods for their use are described. The standardized buffer solution can be used in high throughput screening of G protein-coupled receptor arrays for effector ligands. The buffered assay solution has an underlying composition having: a buffer reagent with a pH in the range of about 6.5 to about 7.9; an inorg. salt of a monovalent or divalent cation, at a concentration from about 1 mM to about 500 mM; and optionally a combination of: a blocker reagent at a concentration of about 0.01 weight % to about 2 weight % of the composition, or a protease-inhibitor at a concentration of about 0.001 mM to about 100 mM. In an embodiment for functional assay uses, the composition is modified to also include a GTP-analog, a GDP salt, and an anti-oxidant.

L23 ANSWER 4 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:119962 CAPLUS  
 DOCUMENT NUMBER: 142:197042  
 TITLE: Compositions for improvement of bioavailability of effective ingredients in general food, health food, or dietary supplements  
 INVENTOR(S): Kawade, Yuji; Osakabe, Naomi; Murashima, Koichiro; Baba, Seigo; Kawabata, Keiko  
 PATENT ASSIGNEE(S): Meiji Seika Kaisha, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005034135	A2	20050210	JP 2004-52598	20040227
PRIORITY APPLN. INFO.:			JP 2003-187715	A 20030630

AB The compns. contain ingredients which are effective for conditioning of the intestinal environment and/or the antioxidant activity. The ingredients effective for conditioning of the intestinal environment may contain probiotics, prebiotics, and/or biogenics such as lactic acid bacteria, oligosaccharides, dietary fiber, or bifidus factor, and the ingredients effective for conditioning of the antioxidant activity may be vitamins, **carotenoids**, and minerals. The bioavailability of effective ingredients in general food, health food, or dietary supplements is improved by intake of the intestinal environment- and/or antioxidant activity-conditioning ingredients.

L23 ANSWER 5 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:55102 CAPLUS  
 DOCUMENT NUMBER: 142:120580  
 TITLE: Tablet and process for producing the same  
 INVENTOR(S): Hara, Takahiro; Kimura, Masao; Sakai, Yasushi  
 PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005004923	A1	20050120	WO 2004-JP10072	20040708

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
 SN, TD, TG

PRIORITY APPLN. INFO.: JP 2003-194798 A 20030710

AB A tablet comprises an active ingredient and either a **cyclodextrin** or a **cyclodextrin** derivative and rapidly disintegrates in the mouth. The tablet is characterized in that the **cyclodextrin** or **cyclodextrin** derivative accounts for 70% by mass or more of the tablet. Also provided is a process for producing the tablet comprising the step of mixing the constituent ingredients together and the step of subsequently tableting the resultant mixture. For example, tablets were formulated containing  $\beta$ - **cyclodextrin** 71.33, lactose 24.50, vitamin C 3.06, CaHPO<sub>4</sub> 1.02, orange flavor 0.1, and sucralose 0.03 %. The tablets were disintegrated in the mouth in 15 s.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 6 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:1081766 CAPLUS

DOCUMENT NUMBER: 142:150970

TITLE: Xanthophylls and  $\alpha$ -tocopherol decrease UVB-induced lipid peroxidation and stress signaling in human lens epithelial cells

AUTHOR(S): Chitchumroonchokchai, Chureeporn; Bomser, Joshua A.; Glamm, Jayme E.; Failla, Mark L.

CORPORATE SOURCE: Ohio State University Interdisciplinary PhD Program in Nutrition, Ohio State University, Columbus, OH, 43210, USA

SOURCE: Journal of Nutrition (2004), 134(12), 3225-3232  
 CODEN: JONUAI; ISSN: 0022-3166

PUBLISHER: American Society for Nutritional Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Epidemiol. studies suggest that consumption of vegetables rich in the xanthophylls **lutein** (LUT) and **zeaxanthin** (ZEA) reduces the risk for developing age-related cataract, a leading cause of vision loss. Although LUT and ZEA are the only dietary **carotenoids** present in the lens, direct evidence for their photoprotective effect in this organ is not available. The present study examined the effects of xanthophylls and  $\alpha$ -tocopherol ( $\alpha$ -TC) on lipid peroxidn. and the mitogen-activated stress signaling pathways in human lens epithelial (HLE) cells following UV B light (UVB) irradiation. When presented with LUT, ZEA, astaxanthin (AST), and  $\alpha$ -TC as methyl- $\beta$ -**cyclodextrin** complexes, HLE cells accumulated the lipophiles in a concentration- and time-dependent manner with uptake of LUT exceeding that of ZEA and AST. Pretreatment of cultures with either 2  $\mu$ mol/L xanthophyll or 10  $\mu$ mol/L  $\alpha$ -TC for 4 h before exposure to 300 J/m<sup>2</sup> UVB radiation decreased lipid peroxidn. by 47-57% compared with UVB-treated control HLE cells. Pretreatment with the xanthophylls and  $\alpha$ -TC also inhibited UVB-induced activation of c-JUN NH<sub>2</sub>-terminal kinase (JNK) and p38 by 50-60 and 25-32%, resp. There was substantial inhibition of UVB-induced JNK and p38 activation for cells containing <0.20 and .apprx.0.30 nmol xanthophylls/mg, resp., whereas >2.3 nmol  $\alpha$ -TC/mg protein was required to significantly decrease UVB-induced stress signaling. These data suggest that xanthophylls are more potent than  $\alpha$ -TC for protecting human lens epithelial cells against UVB insult.

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 7 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:921352 CAPLUS

DOCUMENT NUMBER: 142:266479

TITLE: Bixin and  $\alpha$ - **cyclodextrin** inclusion complex and stability tests

AUTHOR(S): Lyng, Sabrina Mendes Ortega; Passos, Mauricio; Fontana, Jose Domingos

CORPORATE SOURCE: Course of Nutrition, UTP-University Tuiuti of Parana, Brazil

SOURCE: Process Biochemistry (Oxford, United Kingdom) (2005), 40(2), 865-872  
 CODEN: PBCHE5; ISSN: 1359-5113

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Bixin or 6,6'-diapo-.vphi.-.vphi.-carotenodioic acid (mono)-Me ester,

isolated and purified as the major and water insol. **carotenoid** from "urucum" (*Bixa orellana*, L.) seeds, was submitted to complexation with a natural **cyclodextrin** model ( $\alpha$ -CD) using both column percolation and sonication. This water-soluble product was analyzed by spectrophotometry and <sup>1</sup>H NMR to confirm complex formation as well as protection for the **carotenoid** from the effects of light and air or the combination of both. Also evaluated was the capability for free or complexed bixin as quencher/scavenger of free radicals such as  $\alpha$ - $\alpha$ -diphenyl- $\beta$ -picrylhydrazide (DPPH) and its degradation time course when challenged with ozone generated directly in the pigment solution or indirectly in the surrounding environment. The results showed that the complexed form of bixin is more resistant than free bixin to the damage caused by light and air or their combination besides and shows improved water solubility as required for novel formulations of medical or pharmaceutical interest.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 8 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:841791 CAPLUS

DOCUMENT NUMBER: 141:346145

TITLE: Preparation and application of indicator compositions for registering the thawing process

PATENT ASSIGNEE(S): Herrmann, Karsten, Germany; Knittel, Heinz

SOURCE: Ger., 14 pp.  
CODEN: GWXXAW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10325714	B3	20041014	DE 2003-10325714	20030606
EP 1484588	A1	20041208	EP 2004-12972	20040602
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				

PRIORITY APPLN. INFO.: DE 2003-10325714 A 20030606

AB The invention concerns indicator compns. for recognizing and showing that temperature rises above a certain value, especially to indicate thawing processes in a way that the indicator composition includes an encapsulated substance, e.g. dye in cyclodextran that is mixed with a temperature sensitive substance, e.g. mixture of fatty acids, that has a m.p. at the temperature that has to be controlled; upon exceeding the preset temperature the temperature-sensitive mixture melts which in turn causes the encapsulated substance to change its structure and optical properties. Indicator substances include dyes, metal chelates, and multicomponent reaction systems, e.g. enzymes with substrates. The indicator compns. can be packed in transparent material. The heat-sensitive indicators are used for checking the refrigeration of foods and drugs during storage and transportation. Thus bromphenol blue was encapsulated in  $\beta$ -**cyclodextrin**; the complex was embedded in a fatty acid mixture with m.p. of 8°C. The fatty acid mixture was composed of (%): caproic acid 0.25; caprylic acid 2.00; capric acid 1.50; lauric acid 11.75; myristic acid 4.50; palmitic acid 12.00; stearic acid 2.00; oleic acid 57.25; linoleic acid 8.00; linolenic acid 0.75. The indicator mixture was colorless before freezing and it showed a light blue color upon freezing.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 9 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:841592 CAPLUS

DOCUMENT NUMBER: 142:261668

TITLE: Study on the inclusion complexation interaction of  $\beta$ -**cyclodextrin** and  $\beta$ -**carotene** by UV-Vis spectra

AUTHOR(S): Feng, Guang-zhu; Lu, Kui; Li, He-ping  
CORPORATE SOURCE: Department of Chemistry and Chemical Engineering, Zhengzhou Institute of Technology, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Guangpuxue Yu Guangpu Fenxi (2004), 24(9), 1099-1102  
CODEN: GYG FED; ISSN: 1000-0593

PUBLISHER: Beijing Daxue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB  $\beta$ -**Cyclodextrin** ( $\beta$ -CD), a kind of cyclic

oligosaccharides, was found to possess a strong inclusion ability with  $\beta$ -carotene. The inclusion compds. of  $\beta$ -CD with  $\beta$ -carotene were prepared by the copptn. method, and studied by UV-Vis spectra of different mole ratio  $\beta$ -CD/ $\beta$ -carotene in the H<sub>2</sub>O+ ethanol solution (H<sub>2</sub>O for  $\beta$ -CD, and ethanol for  $\beta$ -carotene). Equilibrium constant of inclusion compound was determined by UV-Vis spectra. The results indicate that 3.25 mol of  $\beta$ -CD can include one mole  $\beta$ -carotene to form inclusion compound by Van der Waals force and hydrophobic interaction etc. The optimum synthesis conditions of inclusion compound of  $\beta$ -CD with  $\beta$ -carotene is that the mole ratio of  $\beta$ -CD/ $\beta$ -carotene is 3.25:1 (mol/mol), the concentration ratio of  $\beta$ -CD H<sub>2</sub>O solution  $\beta$ -carotene solution is 12:1 (mol·L<sup>-1</sup>/mol·L<sup>-1</sup>), and the time and temperature of inclusion reaction are 2 h and 30°, resp. Equilibrium constant of inclusion compound (K<sub>a</sub>) is  $9.46 \times 10^{11}$  L·mol<sup>-1</sup>. The selective binding ability of  $\beta$ -CD with  $\beta$ -carotene has been discussed from the viewpoint of size/shape-fitting and geometry fitting between the host cavity and the guest mol. The resistance to oxidation and photooxidn., and the solubility in H<sub>2</sub>O of  $\beta$ -carotene were increased by inclusion with  $\beta$ -CD.

L23 ANSWER 10 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:697588 CAPLUS  
DOCUMENT NUMBER: 141:206101  
TITLE: Manufacture of dried persimmon powders  
INVENTOR(S): Yoshida, Eiichi  
PATENT ASSIGNEE(S): Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004236608	A2	20040826	JP 2003-30467	20030207
PRIORITY APPLN. INFO.:			JP 2003-30467	20030207

AB Dried persimmon powders, useful for foods, are manufactured by (1) cutting 100 g dried persimmon with seeds together with 0.6 g Ca gluconate and 30-40 mL H<sub>2</sub>O, (2) vacuum-drying and freezing the kneaded product, (3) drying the freeze-dried product at a temperature same as or higher than ordinary temperature, and (4) milling the dried product by a mixer. A method using **cyclodextrin** instead of Ca gluconate is also described. The powders are rich in tannins, **carotene**, vitamin A, minerals, etc., and storage stable.

L23 ANSWER 11 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:495551 CAPLUS  
DOCUMENT NUMBER: 141:42585  
TITLE: Cosmetics containing crystalline  $\alpha$ -maltotetraosyl  $\alpha$ -glucoside  
INVENTOR(S): Tachikawa, Hiromi; Aga, Hajime; Kubota, Norio; Fukuda, Shigeharu  
PATENT ASSIGNEE(S): Hayashibara Biochemical Laboratories, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004168785	A2	20040617	JP 2004-26219	20040203
WO 2005074866	A1	20050818	WO 2005-JP1470	20050202

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,

MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

JP 2004-26219

A 20040203

AB This invention relates to cosmetics which provide excellent moisturizing effects. The cosmetics comprise (1) crystalline  $\alpha$ -maltotetraosyl  $\alpha$ -glucoside (I) and (2)  $\geq 1$  or 2 powdery substances selected from the group consisting of silicic acid, silica, Mg silicate, talc, kaolin, mica, bentonite, titanium mica, Bi oxychloride, Zr oxide, MgO, ZnO, titania, CaO, MgCO<sub>3</sub>, iron oxide, ultramarine blue, prussian blue, chromium oxide, chromium hydroxide, calamine, zeolite, carbon black, polyamide, polyester, polyethylene, polypropylene, polystyrene, polyurethane, vinyl resin, urea resin, phenol resin, fluororesin, silicone resin, acrylic resin, melamine resin, epoxy resin, polycarbonate resin, divinylbenzene-styrene copolymer, celluloid, acetyl cellulose, cellulose, starch, chitin, chitosan, and silk. For example, a powder foundation contained silicone-treated titania 8.8, silicone-treated talc 15.29, silicone-treated mica 8.8, liquid sericite 30.8, polymethyl methacrylate 8.8, titania 4.4, saccharides containing I 8.8, silicone-treated yellow iron oxide 1.76, silicone-treated red iron oxide 0.45, silicone-treated black iron oxide 0.1, dimethicone 4.49, trimethylsiloxysilicic acid 1.5, Eldew PS-304 1, neopentyl glycol dioctanoate 1, squalane 4, tocopherol 0.01 %, and preservatives q.s.

L23 ANSWER 12 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:453326 CAPLUS

DOCUMENT NUMBER: 141:8907

TITLE: Bleach-containing cleaning wipes and their uses

INVENTOR(S): Ford, Francis Cornelio; Foley, Peter Robert

PATENT ASSIGNEE(S): The Procter &amp; Gamble Company, USA

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004046301	A1	20040603	WO 2003-US36589	20031114
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2005107282	A1	20050519	US 2003-704883	20031110
CA 2505671	AA	20040603	CA 2003-2505671	20031114
AU 2003295550	A1	20040615	AU 2003-295550	20031114
EP 1560911	A1	20050810	EP 2003-786745	20031114
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
JP 2006505683	T2	20060216	JP 2004-570410	20031114
PRIORITY APPLN. INFO.:			US 2002-426185P	P 20021114
			US 2003-491719P	P 20030801
			WO 2003-US36589	W 20031114

AB A wipe especial suitable for removing **carotenoid** soils from plastic dishware, comprises a water-insol. substrate having applied thereto a cleaning composition comprising: a surfactant and a bleach, which is a peroxy carboxylic acid or a hydrophilic precursor thereof, and/or a hydrophilic bleach or precursors thereof.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 13 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:397705 CAPLUS

DOCUMENT NUMBER: 141:174330

TITLE: Preparation and characterization of inclusion compound of  $\beta$ -**carotene** with  $\beta$ -**cyclodextrin** as [5]-pseudorotaxanes

AUTHOR(S): Sheng, Liang-quan; Zheng, Xiao-yun; Liu, Shao-min; Tong, Hong-wu; Xiao, Hou-rong; Liu, Qing-liang

CORPORATE SOURCE: Department of Chemistry, University of Science and Technology of China, Hefei, Anhui, 230026, Peop. Rep.

SOURCE: China  
Huaxue Yanjiu (2004), 15(1), 5-8  
CODEN: HUYAF4; ISSN: 1008-1011  
PUBLISHER: Huaxue Yanjiu Bianjibu  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
AB A new pseudorotaxanes formed in 1:1 alc.-water solution, by self-assembly of a wire-type mol.  $\beta$ - **carotene** and four **cyclodextrin** mols. was reported. Elemental anal. methods proved the existence of [5]-pseudorotaxanes. Meanwhile, characterizations of the pseudorotaxanes were studied by UV-VIS, FTIR, x-ray diffractometry and <sup>1</sup>H NMR.

L23 ANSWER 14 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:220032 CAPLUS  
DOCUMENT NUMBER: 140:259103  
TITLE: Multi-use vessels and plastic blow fill containers for active vitamin D formulations  
INVENTOR(S): Mazess, Richard B.; Driscoll, Jeffrey W.; Goldensoph, Creighton Reed; Levan, Leon W.  
PATENT ASSIGNEE(S): Bone Care International, Inc., USA  
SOURCE: U.S. Pat. Appl. Publ., 7 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004053895	A1	20040318	US 2002-247766	20020918
US 2004058895	A1	20040325	US 2003-608480	20030627
WO 2004026218	A2	20040401	WO 2003-US28498	20030910
WO 2004026218	A3	20040715		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-247766 A2 20020918

AB This invention relates to multi-use dispensing vessels containing pharmaceutical formulations of active vitamin D compds., and also to plastic fill containers containing active vitamin D formulations. The vitamin D formulation comprises an active vitamin D compound or analog; a non-ionic solubilizer; a lipophilic antioxidant, and optionally, an agent(s) that is an organic solvent, a preservative or both, in an aqueous vehicle. The formulation comprises a vitamin D compound or analog, a non-ionic solubilizer, a small amount of lipophilic antioxidant, and optionally, an agent that includes an organic solvent (e.g., ethanol) or co-solvents (e.g., propylene glycol and ethanol) and/or a preservative (e.g., benzyl alc.). The formulations may be formulated in a variety of concns. in various vial sizes for various administration dosages.

L23 ANSWER 15 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:220031 CAPLUS  
DOCUMENT NUMBER: 140:259102  
TITLE: Formulation for lipophilic agents  
INVENTOR(S): Mazess, Richard B.; Driscoll, Jeffrey W.; Goldensoph, Creighton Reed; Levan, Leon W.  
PATENT ASSIGNEE(S): Bone Care International, Inc., USA  
SOURCE: U.S. Pat. Appl. Publ., 10 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004053894	A1	20040318	US 2002-247765	20020918
CA 2498331	AA	20040401	CA 2003-2498331	20030910
WO 2004026231	A2	20040401	WO 2003-US28499	20030910

WO 2004026231 A3 20040812  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
BR 2003014354 A 20050719 BR 2003-14354 20030910  
EP 1553956 A2 20050720 EP 2003-749606 20030910  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
JP 2006502185 T2 20060119 JP 2004-537767 20030910  
PRIORITY APPLN. INFO.: US 2002-247765 A 20020918  
WO 2003-US28499 W 20030910

AB The invention relates to pharmaceutical formulations of lipophilic therapeutic agents in which such agents are solubilized in largely aqueous vehicles, and processes for preparing and using the same. A formulation was prepared from a vitamin D compound, 1 $\alpha$ -(OH)D<sub>2</sub>, benzyl alc. 2.5, and Tween-20 0.5-2.5% and BHT 20 ppm. The results of the phase one study indicate that patients treated with the MTD of 1 $\alpha$ -(OH)D<sub>2</sub> for at least six months report that bone pain associated with metastatic disease is significantly diminished. The results of the phase two study indicate that after 2 yr, CAT scans, x-rays and bone scans used for evaluating the progression of metastatic disease show stable disease or partial remission in many patients treated at the lower dosage, and stable disease and partial or complete remission in many patients treated at the higher dosage. The present invention provides an improved formulation for lipophilic drug agents that are only slightly soluble in an aqueous vehicle.

L23 ANSWER 16 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:213135 CAPLUS  
DOCUMENT NUMBER: 141:354980  
TITLE: Inclusion complexes of **carotenoids** with **cyclodextrins**: 1H-NMR, EPR, and optical studies  
AUTHOR(S): Polyakov, Nikolai E.; Leshina, Tatyana V.; Konovalova, Tatyana A.; Hand, Elli O.; Kispert, Lowell D.  
CORPORATE SOURCE: Institute of Chemical Kinetics and Combustion, Novosibirsk, 630090, Russia  
SOURCE: Free Radical Biology & Medicine (2004), 36(7), 872-880  
CODEN: FRBMEH; ISSN: 0891-5849  
PUBLISHER: Elsevier  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Direct evidence of **carotenoid/cyclodextrin** inclusion complex formation was obtained for the water-soluble sodium salt of  $\beta$ -caroten-8'-oic acid (I) by using 1H-NMR and UV-Vis absorption spectroscopy. It was shown that this **carotenoid** forms a stable 1:1 inclusion complex with  $\beta$ - **cyclodextrin** (stability constant  $K_{11} \approx 1500 \text{ M}^{-1}$ ). All other **carotenoids** under study in the presence of **cyclodextrins** (CDs) form large aggregates in aqueous solution as demonstrated by very broad absorption spectra and considerable change in color. By using the EPR spin trapping technique, the scavenging ability of I toward OOH radicals was compared in DMSO and in the aqueous CD solution. A considerable decrease in PBN/OOH spin adduct yield was detected in the presence of uncomplexed I because of a competing reaction of the **carotenoid** with OOH radical. No such decrease occurred in the presence of the I/CD complex. Moreover, a small increase in spin adduct yield (pro-oxidant effect) is most likely due to the reaction of the **carotenoid** with Fe<sup>3+</sup> to regenerate Fe<sup>2+</sup>, which in turn regenerates the OOH radical. These data show that CD protects the **carotenoid** from reactive oxygen species. On the other hand, complexation with CD results in considerable decrease in antioxidant ability of the **carotenoid**.

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 17 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:146879 CAPLUS  
DOCUMENT NUMBER: 140:286417  
TITLE: Microencapsulation of lycopene with **cyclodextrins**

AUTHOR(S): Matioli, Graciette; Rodriguez-Amaya, Delia B.  
 CORPORATE SOURCE: UEM-Depto. Farmacia e Farmacologia, Maringa, PR,  
 87020- 9000, Brazil  
 SOURCE: Ciencia e Tecnologia de Alimentos (Campinas, Brazil)  
 (2003), 23(Supl.), 102-105  
 CODEN: CTALDN; ISSN: 0101-2061  
 PUBLISHER: Sociedade Brasileira de Ciencia e Tecnologia de  
 Alimentos  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Portuguese

AB Lycopene is an important **carotenoid** natural substance used in food industry as food dye. It is important for human health because of its role in decreasing the risk of chronic diseases, such as cancer and cardiovascular diseases. Because of its high degree of unsatn., it is prone to isomerization and oxidation. Microencapsulation of lycopene was studied as a preservation procedure using **cyclodextrins** (CD) as encapsulating substances. Lycopene was extracted from guava and isolated on an open column. Lycopene in acetone solution was added to aqueous solns. of  $\alpha$ -,  $\beta$ -, and  $\gamma$ -CD; acetone was subsequently eliminated with N<sub>2</sub> flushing. Initially the complexation with the 3 CD forms was studied at a lycopene:CD molar ratio of 1:50. Lycopene formed complexes with  $\beta$ -CD and  $\gamma$ -CD, but not with  $\alpha$ -CD. After 180 days of storage at refrigeration temperature, the lycopene levels remained constant in the lycopene- $\gamma$ -CD complex, but were decreased by 80% in the lycopene- $\beta$ -CD complex. During evaluation of different lycopene-CD molar ratios, the maximum lycopene inclusion was achieved with  $\gamma$ -CD at lycopene:CD molar ratio of 1:200. The complex was dispersible in water and maintained the red color of lycopene. Its stability under light exposure was excellent, with retention being 100% during 40 days storage at ambient temperature

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 18 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:97234 CAPLUS  
 DOCUMENT NUMBER: 140:142222  
 TITLE: Diagnostic agents for pancreatic exocrine function  
 INVENTOR(S): Kohno, Tadashi; Hosoi, Isaburo; Ohshima, Junko;  
 Shibata, Kunihiko; Ito, Asuka  
 PATENT ASSIGNEE(S): Tokyo Gas Company Limited, Japan  
 SOURCE: Eur. Pat. Appl., 33 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1386934	A1	20040204	EP 2003-77521	19990924
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
JP 2000159773	A2	20000613	JP 1999-261979	19990916
JP 3669880	B2	20050713		
JP 2000159810	A2	20000613	JP 1999-263300	19990917
NZ 507949	A	20020301	NZ 1999-507949	19990921
CA 2451924	AA	20000325	CA 1999-2451924	19990924
EP 989137	A2	20000329	EP 1999-307554	19990924
EP 989137	A3	20001011		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6905668	B1	20050614	US 2000-589419	20000607
AU 769555	B2	20040129	AU 2001-89240	20011105
US 2005019252	A1	20050127	US 2004-926563	20040825
US 2005019253	A1	20050127	US 2004-926564	20040825
US 2005032148	A1	20050210	US 2004-926544	20040825
JP 2006052417	A2	20060223	JP 2005-319212	20051102
PRIORITY APPLN. INFO.:			JP 1998-271252	A 19980925
			JP 1998-271253	A 19980925
			JP 1999-261979	A 19990916
			JP 1999-263300	A 19990917
			EP 1999-307554	A3 19990924
			NZ 1999-337946	A1 19990921
			AU 1999-48865	A3 19990922
			US 1999-401739	A3 19990923
			CA 1999-2283518	A3 19990924

US 2000-589419 A3 20000607

AB The present invention provides a 13C-labeled oligosaccharide or polysaccharide or a salt thereof excluding U-13C-maltose, 13C-starch, 1-13C-maltotetraose and 1-13C-amylose; a derivative of the 13C-labeled oligosaccharide or polysaccharide or salt thereof; a 13C-labeled inclusion complex or a salt thereof, which comprises a **cyclodextrin** or a modified derivative thereof as a host mol.; a 13C- or 14C-labeled fluorescein ester compound or a salt thereof; and a diagnostic agents for pancreatic exocrine function comprising these compds. 13C- or 14C-labeled.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 19 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:41525 CAPLUS

DOCUMENT NUMBER: 140:110455

TITLE: Complexes of **cyclodextrins** and **carotenoids** for use in feed

INVENTOR(S): Mortensen, Bjarte; Jansson, Stig Tore Kragh

PATENT ASSIGNEE(S): Poltec As, Norway

SOURCE: PCT Int. Appl., 59 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004005353	A1	20040115	WO 2003-NO236	20030704
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2003258890	A1	20040123	AU 2003-258890	20030704
PRIORITY APPLN. INFO.:			DK 2002-1049	A 20020704
			WO 2003-NO236	W 20030704

AB A complex between a **carotenoid** (e.g., astaxanthin) and **cyclodextrin** is used in feed to enhance the pigmentation in tissues of animals (especially fish with colored flesh). Thus, salmon (*Salmo salar*) pigmentation and astaxanthin content is improved by incorporation of astaxanthin-**cyclodextrin** complex in feed. The storage stability and color retention of the complexed **carotenoid** is greatly improved compared to uncomplexed **carotenoid**.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 20 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:673823 CAPLUS

DOCUMENT NUMBER: 139:185349

TITLE: Skin preparations containing branched glucans

INVENTOR(S): Kuroda, Akihiro; Ogawa, Tomoyasu; Takaha, Takeshi; Takada, Hiroki; Kuriki, Takashi

PATENT ASSIGNEE(S): Kanebo, Ltd., Japan; Ezaki Glico Co.

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003238447	A2	20030827	JP 2002-31831	20020208
PRIORITY APPLN. INFO.:			JP 2002-31831	20020208

AB This invention relates to skin preps. to be applied safely without damaging effects of biol. active agents, which comprise (1) glucans having a polymerization degree of 50-5000 and having an inner branched cyclic structure portion and an outer branched structure portion and (2) active agents selected from the group consisting of exts. of *Althaea*, apricot kernel, fennel, turmeric, oolong tea, rose, phellodendron bark, seaweed, silk

hydrolyzates, chamomilla, licorice, kiwi, black tea, burdock, fermented rice bran, comfrey, hawthorn, Rehmannia root, Perilla, iris, Equisetum arvense, sage, Swertia japonica, green tea, clove, citrus unshin peel, peach kernel, natto, carrot, hibiscus, honey, pine tree, loquat, hoelen, peach leaves, Saxifraga, citrus junos, mucopolysaccharides, sphingolipids, ceramides, cholesterol (or its derivs.), phospholipids, glycyrrhizinic acid (or its salts), vitamin A (or its derivs.), vitamin E (or its derivs.), **carotenoids**, flavonoids, saponins, and/or ascorbic acid (or its derivs.).

L23 ANSWER 21 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:584831 CAPLUS

DOCUMENT NUMBER: 139:270975

TITLE: Direct superoxide anion scavenging by a disodium disuccinate astaxanthin derivative: relative efficacy of individual stereoisomers versus the statistical mixture of stereoisomers by electron paramagnetic resonance imaging

AUTHOR(S): Cardounel, Arturo J.; Dumitrescu, Christian; Zweier, Jay L.; Lockwood, Samuel F.

CORPORATE SOURCE: Davis Heart and Lung Research Institute, Columbus, OH, 43210-1252, USA

SOURCE: Biochemical and Biophysical Research Communications (2003), 307(3), 704-712

CODEN: BBRC9; ISSN: 0006-291X

PUBLISHER: Elsevier Science

DOCUMENT TYPE: Journal

LANGUAGE: English

AB **Carotenoids** are a related group of greater than 600 natural compds., irres. of geometric- and stereoisomers, with demonstrated antioxidant efficacy. The **carotenoids** are broadly divided into "**carotenes**," or non-oxygen substituted hydrocarbon **carotenoids**, and "xanthophylls," oxygen-substituted **carotenoids**. The natural compds. are excellent singlet oxygen quenchers as well as lipid peroxidn. chain-breakers; this dual antioxidant capacity is generally attributed to the activity of the polyene chain, and increases with the number of conjugated double bonds along the polyene chain length. However, the poor aqueous solubility of most **carotenes** and the vast majority of xanthophylls limits their use as aqueous-phase singlet oxygen quenchers and direct radical scavengers. A variety of introduction vehicles (e.g., organic solvents, **cyclodextrins**) have been used to introduce the insol. **carotenoids** into aqueous test systems. Hawaii Biotech, Inc. (HBI) successfully synthesized a novel **carotenoid** derivative, the disodium disuccinate derivative of astaxanthin (3,3'-dihydroxy- $\beta$ , $\beta$ - **carotene**-4,4'-dione) in all-trans (all-E) form. The novel derivative is a water-dispersible sym. chiral mol. with two chiral centers, yielding four stereoisomeric forms: 3R,3'R and 3S,3'S (enantiomers), and the diastereomeric meso forms (3R,3'S and 3'R,3S). The individual stereoisomers were synthesized at high purity (>90% by HPLC) and compared directly for efficacy with the statistical mixture of stereoisomers obtained from the synthesis from the com. source of astaxanthin (1:2:1 ratio of 3S,3'S, meso, and 3R,3'R, resp.). Direct scavenging of superoxide anion was evaluated in a standard in vitro isolated human neutrophil assay by ESR (EPR) imaging, employing the spin-trap DEPMPO. Each novel derivative was tested in pure aqueous formulation and in ethanolic formulation shown to completely disaggregate the compds. in solution. In each case, the ethanolic formulation was a more potent scavenging vehicle. No significant differences in scavenging efficiency were noted among the individual stereoisomers and the statistical mixture of stereoisomers, suggesting that the polyene chain alone was responsible for superoxide scavenging. Dose-ranging revealed that the statistical mixture of stereoisomers of the novel derivative, at millimolar (mM) concns., could nearly completely eliminate the superoxide anion signal generated in the activated human neutrophil assay. All ethanolic formulations of the novel derivs. exhibited increased scavenging efficiency over equimolar concns. of non-esterified astaxanthin delivered in a DMSO vehicle. These novel compds. will likely find utility in applications requiring aqueous delivery of a highly potent direct radical scavenger.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 22 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:377207 CAPLUS

DOCUMENT NUMBER: 138:361479

TITLE: Molecular electronic component used to construct nanoelectronic circuits, molecular electronic

component, electronic circuit and method for producing the same  
 INVENTOR(S): Lossau, Harald; Hartwich, Gerhard  
 PATENT ASSIGNEE(S): Friz Biochem GmbH, Germany  
 SOURCE: PCT Int. Appl., 47 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003041182	A2	20030515	WO 2002-DE4144	20021108
WO 2003041182	A3	20031030		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10155054	A1	20030612	DE 2001-10155054	20011109
DE 10155054	C2	20031023		
DE 20121631	U1	20030724	DE 2001-20121631	20011109
AU 2002351666	A1	20030519	AU 2002-351666	20021108
EP 1442485	A2	20040804	EP 2002-787355	20021108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
PRIORITY APPLN. INFO.:			DE 2001-10155054	A 20011109
			WO 2002-DE4144	W 20021108
AB The invention relates to a mol. electronic component used to construct nanoelectronic circuits. The mol. electronic component comprises a redox-active unit with an electron donor and an electron acceptor. The electron donor and the electron acceptor comprise 1 point of contact each for connection to other components and the points of contact allow a charge carrier transfer to the component and away from the component. Especially, the point of contact of electron donor and electron acceptor is a permanent point of contact for mediating charge carrier transport via a permanent chemical bond, the point of contact comprising 1 binding partner of the chemical bond each. A plurality of such components can be assembled via the points of contact to an assembly or to an electronic circuit.				
L23 ANSWER 23 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN				
ACCESSION NUMBER:		2003:284518 CAPLUS		
DOCUMENT NUMBER:		139:138466		
TITLE:		Extraction of <b>carotenoids</b> from Folium Perillae (purple and green leaves)		
AUTHOR(S):		Liu, Dachuan; Wang, Jing		
CORPORATE SOURCE:		Wuhan Polytechnic University, Wuhan, 430023, Peop. Rep. China		
SOURCE:		Zhongguo Liangyou Xuebao (2002), 17(1), 54-58		
		CODEN: ZLXUFO; ISSN: 1003-0174		
PUBLISHER:		Zhongguo Liangyou Xuebao Bianjibu		
DOCUMENT TYPE:		Journal		
LANGUAGE:		Chinese		
AB The condition for extracting <b>carotenoids</b> from Folium Perillae (purple and green leaves) was optimized through odd factor tests and orthogonal experiment. The factors affecting extraction of <b>carotenoids</b> during supercrit. CO <sub>2</sub> extraction were studied. The identification of the main components of <b>carotenoids</b> were accomplished by HPLC. The microencapsulation of <b>carotenoids</b> with $\beta$ - <b>cyclodextrin</b> as wall material was also investigated.				
L23 ANSWER 24 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN				
ACCESSION NUMBER:		2003:277327 CAPLUS		
DOCUMENT NUMBER:		139:312168		
TITLE:		Improved aqueous solubility of crystalline astaxanthin (3,3'-dihydroxy- $\beta$ , $\beta$ - <b>carotene</b> -4,4'-dione) by Captisol (sulfobutyl ether $\beta$ - <b>cyclodextrin</b> )		
AUTHOR(S):		Lockwood, Samuel F.; O'Malley, Sean; Mosher, Gerold L.		
CORPORATE SOURCE:		Hawaii Biotech, Inc., Aiea, HI, 96701, USA		

SOURCE: Journal of Pharmaceutical Sciences (2003), 92(4),  
922-926  
CODEN: JPMSAE; ISSN: 0022-3549  
PUBLISHER: Wiley-Liss, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB In the current study, the ability of sulfoethyl ether  $\beta$ -**cyclodextrin** (sodium), as the Captisol brand, to increase the aqueous water solubility of crystalline astaxanthin was evaluated. Complexation of crystalline astaxanthin with Captisol increased the apparent water solubility of crystalline astaxanthin approx. 71-fold, to a concentration in the 2  $\mu\text{g/mL}$  range. It is unlikely that this increase in solubility will result in a pharmaceutically acceptable chemical delivery system for humans. However, the increased aqueous solubility of crystalline astaxanthin to the range achieved in the current study will likely find utility in the introduction of crystalline astaxanthin into mammalian cell culture systems that have previously been dependent upon liposomes, or toxic organic solvents, for the introduction of **carotenoids** into aqueous solution

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 25 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:124444 CAPLUS

DOCUMENT NUMBER: 139:296654

TITLE: Preparation of chlorinating hemin capsules and observation of their dissolution rate

AUTHOR(S): Yuan, Xi; Hong, Qing; Lin, Gongzhou; Xu, Renfei

CORPORATE SOURCE: the First Affiliated Hospital, Fujian Medical University, Fuzhou, 350005, Peop. Rep. China

SOURCE: Zhongguo Yiyuan Yaoxue Zazhi (2002), 22(8), 499-500  
CODEN: ZYYAEP; ISSN: 1001-5213

PUBLISHER: Zhongguo Yiyuan Yaoxue Zazhi Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The chlorinating hemin capsules were prepared from hemin,  $\beta$ -**carotene** and other components and their dissoln. rate was observed. Hemin and  $\beta$ -**carotene** were coated with  $\beta$ -**cyclodextrin** and then the complex capsules were prepared. The chlorinating hemin and  $\beta$ -**carotene** were extracted and determined by spectrophotometric method. The results showed that the accumulating dissoln. rate of chlorinating hemin and  $\beta$ -**carotene** was >70%. The method for preparing chlorinating hemin capsules was suitable and their quality was reliable and met the standard of Chinese Pharmacopoeia.

L23 ANSWER 26 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:574905 CAPLUS

DOCUMENT NUMBER: 137:129822

TITLE: Method of preparing pharmaceutical or dietary compositions for conveying labile substances into the intestine

INVENTOR(S): Cecchetti, Sergio; Gatti, Valter

PATENT ASSIGNEE(S): Giuliani S.P.A., Italy

SOURCE: PCT Int. Appl., 22 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002058673	A1	20020801	WO 2002-EP515	20020117
WO 2002058673	C1	20040527		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: IT 2001-MI141 A 20010126

AB Method of preparation of pharmaceutical or dietary compns. comprising a polysaccharide, a phospholipid and an active principle, characterized in

that it comprises the following stages: (a) dry mixing of the said polysaccharide, phospholipid and active principle; (b) adding an aqueous solution containing a pH buffer, in a smaller amount by weight relative to the dry mixture obtained in the said stage (a) and in a ratio not greater than 1:3, thus forming moist granules; (c) drying of the said moist granules, thus obtaining the said compns. in the form of powder. Thus a powder containing a lipase inhibiting active substance was prepared using a Lodige-type mixer and fluidized-bed drying. The ingredients were (kg): oat fiber 100; hydrolized protein 60; Vitamin E (50%) 2; beta **carotene** (10%) 1; chromium-containing yeast (0.3); maltodextrin 50; soy lecithin 50; citric acid/sodium citrate buffer pH = 4-5 30 L;.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 27 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:504594 CAPLUS

DOCUMENT NUMBER: 137:68183

TITLE: Pharmaceutical compositions consisting of water-soluble or poorly water-soluble active substances and hyaluronic acid

INVENTOR(S): Kloecker, Norbert

PATENT ASSIGNEE(S): Audit Institute for Medical Services and Quality Assurance G.m.b.H., Germany

SOURCE: PCT Int. Appl., 19 pp.

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002051380	A1	20020704	WO 2001-EP15344	20011227
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
DE 10064219	A1	20020711	DE 2000-10064219	20001222

PRIORITY APPLN. INFO.: DE 2000-10064219 A 20001222

AB The invention relates to a pharmaceutical preparation consisting of at least one water-soluble or poorly water-soluble active substance, of hyaluronic acid or its derivs. and, optionally, of at least one solubilizer and/or adjuvant. The formulations are especially used for nasal compns. Thus 50 mg Fentanyl and 0.01 g hyaluronic acid were dissolved in 100 mL water, sterile filtrated and filled in a pump spray that was set for 140 mL doses.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 28 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:438204 CAPLUS

DOCUMENT NUMBER: 137:311101

TITLE: Non-covalent associations of cyclomaltooligosaccharides (**cyclodextrins**) with **carotenoids** in water. A study on the  $\alpha$ - and  $\beta$ - **cyclodextrin** / $\psi$ , $\psi$ - **carotene** (lycopene) systems by light scattering, ion-spray ionization and tandem mass spectrometry

AUTHOR(S): Mele, Andrea; Mendichi, Raniero; Selva, Antonio; Molnar, Peter; Toth, Gyula

CORPORATE SOURCE: Dipartimento di Chimica, Materiali ed Ingegneria Chimica "G. Natta", Politecnico di Milano, Milan, I-20131, Italy

SOURCE: Carbohydrate Research (2002), 337(12), 1129-1136

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Water-soluble complexes of the dietary **carotenoid**  $\psi$ , $\psi$ -**carotene** (lycopene) with cyclomaltohexaose ( $\alpha$ -**cyclodextrin**,  $\alpha$ CD) and cyclomaltoheptaose ( $\beta$ -**cyclodextrin**,  $\beta$ CD) have been prepared and characterized via multi-angle light scattering (MALS), ion-spray/electrospray ionization (IS/ESI) mass spectrometry (MS) and tandem MS. MALS expts. point out that large aggregates of particles, on the nanometer-size scale, are present in water, with meaningful differences in the shape of the  $\alpha$ CD/lycopene

aggregates with respect to  $\beta$ CD/lycopene analogs. The true 1:1  $\alpha$ CD/lycopene inclusion complex has been observed by IS/ESIMS and confirmed by tandem MS. The structure of CD/lycopene aggregations in water is proposed which are consistent with the combined MALS and MS exptl. results.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 29 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:181487 CAPLUS

DOCUMENT NUMBER: 137:133916

TITLE: A supramolecular enzyme model catalyzing the central cleavage of **carotenoids**

AUTHOR(S): French, Richard R.; Holzer, Philipp; Leuenberger, Michele; Nold, Mathias C.; Woggon, Wolf-D.

CORPORATE SOURCE: University of Basel, Institute of Organic Chemistry, Basel, CH-4056, Switz.

SOURCE: Journal of Inorganic Biochemistry (2002), 88(3-4), 295-304

CODEN: JIBIDJ; ISSN: 0162-0134

PUBLISHER: Elsevier Science Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:133916

AB Several bis- $\beta$ - **cyclodextrin** metalloporphyrins were prepared as supramol. receptors of **carotenoids**. The binding consts. of **carotenoids** to receptors were determined by quenching the fluorescence of the porphyrins on hydrophobic binding of **carotenoids** within the cavities of **cyclodextrins**.  $K_a = 8.3 \times 10^6 \text{ M}^{-1}$  was calculated for binding of  $\beta, \beta$ - **carotene** to bis- $\beta$ - **cyclodextrin** Zn porphyrin. The corresponding Ru complex catalyzes the central cleavage of **carotenoids** in the presence of tert-Bu hydroperoxide in a biphasic system.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 30 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:106163 CAPLUS

DOCUMENT NUMBER: 136:293724

TITLE: Development and Validation of Oxygen Radical Absorbance Capacity Assay for Lipophilic Antioxidants Using Randomly Methylated  $\beta$ - **Cyclodextrin** as the Solubility Enhancer

AUTHOR(S): Huang, Dejian; Ou, Boxin; Hampsch-Woodill, Maureen; Flanagan, Judith A.; Deemer, Elizabeth K.

CORPORATE SOURCE: Brunswick Laboratories, Wareham, MA, 02571, USA

SOURCE: Journal of Agricultural and Food Chemistry (2002), 50(7), 1815-1821

CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors recently reported the improved oxygen radical absorbance capacity (ORAC) assay using fluorescein (FL) as the fluorescent probe. The current ORACFL assay is limited in hydrophilic antioxidant due to the aqueous environment of the assay. Lipophilic antioxidants mainly include the vitamin E family and **carotenoids**, which play a critical role in biol. defense systems. The current ORACFL assay was expanded to lipophilic antioxidants. Randomly methylated  $\beta$ - **cyclodextrin** (RMCD) was introduced as the water solubility enhancer for lipophilic antioxidants. Seven percent RMCD (weight/volume) in a 50% acetone-H<sub>2</sub>O mixture was found to sufficiently solubilize vitamin E compds. and other lipophilic phenolic antioxidants in 75 mM phosphate buffer (pH 7.4). This newly developed ORAC assay (abbreviated ORACFL-LIPO) was validated through linearity, precision, accuracy, and ruggedness. The validation results demonstrate that the ORACFL-LIPO assay is reliable and robust. For the first time, by using 6-hydroxy-2,5,7,8-tetramethyl-2-carboxylic acid as a standard (1.0), the ORAC values of  $\alpha$ -tocopherol, (+)- $\gamma$ -tocopherol, (+)- $\delta$ -tocopherol,  $\alpha$ -tocopherol acetate, tocotrienols, 2,6-di-tert-butyl-4-methylphenol, and  $\gamma$ -oryzanol were determined to be  $0.5 \pm 0.02$ ,  $0.74 \pm 0.03$ ,  $1.36 \pm 0.14$ ,  $0.00$ ,  $0.91 \pm 0.04$ ,  $0.16 \pm 0.01$ , and  $3.00 \pm 0.26$ , resp. The structural information of oxidized  $\alpha$ -tocopherol obtained by liquid chromatog./mass spectrometry reveals that the mechanism for the reaction between the vitamin E and the peroxy radical follows the hydrogen atom transfer mechanism, which is in agreement with the notion that vitamin E is the chain-breaking

antioxidant.  
 REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 31 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:935332 CAPLUS

DOCUMENT NUMBER: 136:33335

TITLE: Enhancement of the activity of **carotenoid**  
 biosynthesis inhibitor herbicides by applying them  
 directly to soil with inert solid carrier

INVENTOR(S): Aven, Michael; Brandt, Astrid; Nelgen, Norbert

PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001097613	A2	20011227	WO 2001-EP7109	20010622
WO 2001097613	A3	20020502		
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,				
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,				
VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,				
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002039968	A1	20020404	US 2001-865023	20010524
US 6894003	B2	20050517		
EP 1292191	A2	20030319	EP 2001-965026	20010622
EP 1292191	B1	20050302		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
AT 289751	E	20050315	AT 2001-965026	20010622
PRIORITY APPLN. INFO.:			US 2000-213819P	P 20000623
			US 2000-222535P	P 20000802
			WO 2001-EP7109	W 20010622

OTHER SOURCE(S): MARPAT 136:33335

AB The efficacy of a herbicidal compound I (Markush included) is increased by  
 applying an effective amount of said herbicidal compound directly to the soil  
 in the form of a solid granule, which contains said herbicidal compound and  
 at least one inert solid carrier. Solid granular compns. of herbicidal  
 compds. I and at least one inert solid carrier are provided, as well as  
 methods for the use of said compns. in the control of weeds.

L23 ANSWER 32 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:833060 CAPLUS

DOCUMENT NUMBER: 135:376741

TITLE: Stable metal ion-lipid powdered pharmaceutical  
 compositions

INVENTOR(S): Dellamary, Luis A.; Riess, Jean; Schutt, Ernest G.;

Weers, Jeffery G.; Tarara, Thomas E.

PATENT ASSIGNEE(S): Alliance Pharmaceutical Corp., USA

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 9

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001085137	A2	20011115	WO 2001-US14824	20010508
WO 2001085137	A3	20020418		
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,				
CN, CR, CU, CZ, DE, DK, DM, DZ, EE, EE, ES, FI, FI,				
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,				
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,				
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR,				
TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,				
RU, TJ, TM				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6630169 B1 20031007 US 2000-720536 20001222  
 CA 2408464 AA 20011115 CA 2001-2408464 20010508  
 EP 1282405 A2 20030212 EP 2001-933194 20010508

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2003533449 T2 20031111 JP 2001-581791 20010508  
 US 2000-568818 A 20000510  
 WO 1999-US6855 W 19990331  
 WO 2001-US14824 W 20010508

PRIORITY APPLN. INFO.:

AB Microparticle compns. comprising metal ion-lipid complexes for drug delivery are described including methods of making the microparticle compns. and methods of treating certain conditions and disease states by administering the microparticle compns. The metal ion-lipid complexes can be combined with various drugs or active agents for therapeutic administration. The microparticle compns. of the present invention have superior stability to other microparticle compns. resulting in a microparticle composition with longer shelf life and improved dispersibility. The microparticle compns. of the present invention have a transition temperature (T<sub>m</sub>) of at least 20° above the recommended storage temperature (T<sub>st</sub>) for drug delivery. An aqueous preparation was prepared by mixing two preps., A and B, immediately prior to spray drying. The preparation A was comprised of a fluorocarbon-in-water emulsion in which 26 g perfluorooctyl bromide was dispersed in 33 g water with the aid of 1.30 g of SPC-3 emulsifier (hydrogenated soy phosphatidylcholine). The preparation B contained 0.162 g CaCl<sub>2</sub>·2H<sub>2</sub>O and 0.162 g budesonide dissolved/suspended in 4 g water. The resulting microparticle of the sample had a PL-budesonide-CaCl<sub>2</sub>·2H<sub>2</sub>O weight ratio of about 80:10:10. The mean volume aerodynamic particle size of the dry powder was approx. 4.1 µm.

L23 ANSWER 33 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:610975 CAPLUS

DOCUMENT NUMBER: 136:390842

TITLE: **Carotenoid** incorporation into natural membranes from artificial carriers: liposomes and **β-cyclodextrins**

AUTHOR(S): Lancrajan, I.; Diehl, H. A.; Socaciu, C.; Engelke, M.; Zorn-Kruppa, M.

CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of Agricultural Sciences and Veterinary Medicine, Napoca, Cluj, Rom.

SOURCE: Chemistry and Physics of Lipids (2001), 112(1), 1-10  
 CODEN: CPLIA4; ISSN: 0009-3084

PUBLISHER: Elsevier Science Ireland Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Liposomes and **β-cyclodextrin** (β-CD) have been used as carriers for the incorporation of three dietary **carotenoids** (β-**carotene** (BC), **lutein** (LUT) and canthaxanthin (CTX)) into plasma, mitochondrial, microsomal and nuclear membrane fractions from pig liver cells or the retinal epithelial cell line D407. The uptake dynamics of the **carotenoids** from the carriers to the organelle membranes and their incorporation yield (IY) was followed by incubations at pH 7.4 for up to 3 h. The mean IYs saturated between 0.1 and 0.9 after 10-30 min of incubation, depending on membrane characteristics (cholesterol to phospholipid ratio) and **carotenoid** specificity. Mitochondrial membranes (more fluid) favor the incorporation of BC (non-polar), while plasma membranes (more rigid) facilitate the incorporation of **lutein**, the most polar **carotenoid**. A high susceptibility of BC to degradation in the microsomal suspension was observed by parallel incubations with/without 2,6-di-t-butyl-p-cresol (BHT) as antioxidant additive. The β-CD carrier showed to be more effective for the incorporation of **lutein** while BC was incorporated equally into natural membranes either from liposomes or from **cyclodextrins**. The presence of cytosol in the incubation mixture had no significant effects on the **carotenoid** incorporations.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 34 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:338296 CAPLUS

DOCUMENT NUMBER: 134:325509

TITLE: Fibrous-liponutritional complexes and compositions containing them

INVENTOR(S): Pistolesi, Elvira; Cestaro, Benvenuto  
 PATENT ASSIGNEE(S): Hunza Di Maria Carmela Marazzita S.A.S., Italy  
 SOURCE: PCT Int. Appl., 13 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032038	A1	20010510	WO 2000-EP10500	20001025
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
IT 99MI2263	A1	20010430	IT 1999-MI2263	19991029
IT 2000MI1622	A1	20020118	IT 2000-MI1622	20000718
IT 1318627	B1	20030827		
AU 2001012754	A5	20010514	AU 2001-12754	20001025
EP 1225814	A1	20020731	EP 2000-974454	20001025
EP 1225814	B1	20050427		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003521241	T2	20030715	JP 2001-534254	20001025
AT 293895	E	20050515	AT 2000-974454	20001025
PRIORITY APPLN. INFO.: IT 1999-MI2263 A 19991029 IT 2000-MI1622 A 20000718 WO 2000-EP10500 W 20001025				

AB Fibrous-liponutritional complexes comprising one or more nutritional substances capable of promoting health and therapeutical beneficial activities together with one or more phospholipid component and one or more fibrous polysaccharide component; pharmaceutical formulations and foods containing said fibrous-liponutritional complexes; processes for the preparation of said complexes which are capable of inducing a surprisingly higher increase in the health and therapeutic beneficial activities than that expected for the single nutritional substances used.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 35 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:891116 CAPLUS

DOCUMENT NUMBER: 135:102669

TITLE: Effect of **cyclodextrin-encapsulated  $\beta$ -carotene** on progesterone production by bovine luteal cells

AUTHOR(S): Arikan, S.; Rodway, R. G.

CORPORATE SOURCE: Department of Animal Physiology and Nutrition, University of Leeds, Leeds, LS2 9JT, UK

SOURCE: Animal Reproduction Science (2000), 64(3,4), 149-160  
 CODEN: ANRSDV; ISSN: 0378-4320

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Expts. were conducted to examine the effect of **cyclodextrin-encapsulated  $\beta$ -carotene** on basal or cholesterol (**cyclodextrin-encapsulated**), LH and dibutyryl cAMP (dbcAMP)-stimulated progesterone production by bovine corpus luteum cells isolated from mid-luteal heifer ovaries by collagenase digestion. Cells were cultured with serum-free DMEM/Ham's F12 medium in serum pre-treated plastic culture dishes for periods of up to 11 days. Medium was replaced after 24 h and thereafter every 48 h.  **$\beta$ -Carotene** was added to cultures in a carrier mol., dimethyl- **$\beta$ -cyclodextrin**, to facilitate dissoln. All treatments were started on day 3 of culture. Treatment of cells with 1 or 2  $\mu\text{mol/l}$   **$\beta$ -carotene** resulted in sharp inhibition of progesterone production. On the contrary, treatment of cells with 0.1  $\mu\text{mol/l}$   **$\beta$ -carotene** resulted in significant stimulation ( $P < 0.05$ ) of both basal and cholesterol-stimulated progesterone secretion. The effect of  **$\beta$ -carotene** on LH or dbcAMP-stimulated progesterone production was also examined. Treatment of cells with LH or dbcAMP always resulted in stimulation of progesterone

secretion ( $P < 0.001$ ). However, cells treated with LH plus  $\beta$ -**carotene** or dbcAMP plus  $\beta$ -**carotene** both produced significantly ( $P < 0.01$ ) less progesterone relative to those cells treated with LH or dbcAMP alone on days 7, 9 and 11 of culture. These results indicate that  $\beta$ -**carotene** can enhance luteal steroidogenesis when present at low concns. but is inhibitory at higher concns. and that encapsulation of  $\beta$ -**carotene** in **cyclodextrin** is an effective method of supplying it to cells in culture.

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 36 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:878928 CAPLUS

DOCUMENT NUMBER: 134:204135

TITLE: The central cleavage of  $\beta, \beta$ -**carotene**  
- a supramolecular mimic of enzymatic catalysis

AUTHOR(S): Woggon, Wolf-D.

CORPORATE SOURCE: Institute of Organic Chemistry, University of Basel,  
Basel, CH-4056, Switz.

SOURCE: Chimia (2000), 54(10), 564-568

CODEN: CHIMAD; ISSN: 0009-4293

PUBLISHER: Neue Schweizerische Chemische Gesellschaft

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 19 refs. The enzyme  $\beta, \beta$ -**carotene** 15,15'-dioxygenase which cleaves  $\beta, \beta$ -**carotene** to retinal (provitamin A) has been identified for the first time in chicken intestinal mucosa and subsequently sequenced and expressed in two different cell lines. To mimic this unusual metabolism a supramol. receptor has been synthesized which binds  $\beta, \beta$ -**carotene** with  $K_a = 8.3 \times 10^6 \text{ M}^{-1}$  and it was shown that the corresponding oxo-ruthenium complex catalyzes the selective cleavage of **carotenoids**.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 37 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:508196 CAPLUS

DOCUMENT NUMBER: 133:115154

TITLE: Combined dehydroepiandrosterone and retinoid therapy  
for epithelial disorders

INVENTOR(S): Zeligs, Michael A.

PATENT ASSIGNEE(S): BioResponse, L.L.C., USA

SOURCE: U.S., 9 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6093706	A	20000725	US 1992-845560	19920304
			US 1992-845560	19920304

PRIORITY APPLN. INFO.:  
AB Comps. and methods are provided for the treatment of oxidative epithelial damage, for inadequate surfactant production in lung disorders, and for disorders of the urinary bladder epithelium. The comps. of the invention comprise dehydroepiandrosterone and vitamin A derivs.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 38 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:335023 CAPLUS

DOCUMENT NUMBER: 132:339428

TITLE: Defined serum-free medical solution for ophthalmology

INVENTOR(S): Skelnik, Debra A.

PATENT ASSIGNEE(S): Bausch and Lomb Surgical, Inc., USA

SOURCE: Eur. Pat. Appl., 27 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1000541	A1	20000517	EP 1999-308702	19991102

EP 1000541 B1 20040114  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO  
 US 6153582 A 20001128 US 1998-186580 19981105  
 AU 9957108 A1 20000511 AU 1999-57108 19991028  
 AU 769082 B2 20040115  
 JP 2000198701 A2 20000718 JP 1999-313063 19991102  
 AT 257648 E 20040115 AT 1999-308702 19991102  
 PT 1000541 T 20040831 PT 1999-308702 19991102  
 ES 2217700 T3 20041101 ES 1999-308702 19991102  
 PRIORITY APPLN. INFO.: US 1998-186580 A 19981105  
 AB The title solution contains one or more cell nutrient supplements and a growth factor which maintains and enhances the preservation of eye tissues, including human corneal, retinal, and corneal epithelial tissues at low to physiol. temperature (2-38°). This solution is composed of a defined aqueous nutrient and electrolyte solution, supplemented with glycosaminoglycans, deturgescent agents, energy sources, buffer systems, antioxidants, membrane stabilizers, antibiotics, antimycotics, ATP or energy precursors, nutrient cell supplements, nonessential amino acids, trace minerals, trace elements, and growth factors.  
 REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 39 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:326526 CAPLUS  
 TITLE: Chirospecific analysis of norisoprenoid volatiles using chiral GC.  
 AUTHOR(S): Rouseff, Russell; Winterhalter, Peter  
 CORPORATE SOURCE: Citrus Research & Education Center, University of Florida, Lake Alfred, FL, 33850, USA  
 SOURCE: Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), AGFD-067. American Chemical Society: Washington, D. C.  
 CODEN: 69CLAC  
 DOCUMENT TYPE: Conference; Meeting Abstract  
 LANGUAGE: English  
 AB The tremendous progress in chiropecific anal. in recent years was mainly due to the com. introduction of modified **cyclodextrin** columns. Because of the complexity of natural flavor isolates application of multidimensional gas chromatog. (MDGC) online coupled to mass spectrometry is the method of choice for the accurate determination of the enantiomeric composition of chiral flavor compds. in natural mixts. Apart from authenticity control chirospecific analyses also give an insight into the enantioselectivity of biogenetic pathways. For a series of **carotenoid**-derived aroma compds. the enantiomeric distribution has been reported. An overview of the findings will be presented here.

L23 ANSWER 40 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:311989 CAPLUS  
 DOCUMENT NUMBER: 133:119568  
 TITLE: **β- Carotene**-containing preparations enhance antioxidant potential of the liver and myocardium  
 AUTHOR(S): Tikhaze, A. K.; Konovalova, G. G.; Lankin, V. Z.  
 CORPORATE SOURCE: Laboratory of Free Radical Processes, A. L. Myasnikov Institute of Cardiology, Ministry of Health of the Russian Federation, Moscow, Russia  
 SOURCE: Bulletin of Experimental Biology and Medicine (Translation of Byulleten Eksperimental'noi Biologii i Meditsiny) (2000), Volume Date 1999, 128(9), 939-941  
 CODEN: BEXBAN; ISSN: 0007-4888  
 PUBLISHER: Consultants Bureau  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The effects of **β- carotene**-containing food additives carinate and carinate CD on the antioxidant potential of rat liver and myocardium were examined. Daily oral administration of these drugs in doses equal to 0.4 and 14 mg/kg **β- carotene** inhibited ascorbate-dependent peroxidn. of endogenous lipids in hepatocytes and cardiomyocytes 1.5-6.5- and 1.5-40-fold, resp., depending on **β- carotene** form and dose. Carinate CD containing a complex of **β- carotene** with **β- cyclodextrin** was a more potent inhibitor of lipid peroxidn. in the liver and myocardium than carinate containing free **β- carotene**. **β- Carotene**-containing food additives can be recommended for the prophylaxis of cardiovascular, oncol., and other diseases.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 41 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:258588 CAPLUS

DOCUMENT NUMBER: 133:17665

TITLE: A supramolecular enzyme mimic that catalyzes the 15,15' double bond scission of  $\beta,\beta$ -carotene

AUTHOR(S): French, Richard R.; Holzer, Philipp; Leuenberger, Michele G.; Woggon, Wolf-D.

CORPORATE SOURCE: Institut fur Organische Chemie der Universitat Basel, Basel, 4056, Switz.

SOURCE: Angewandte Chemie, International Edition (2000), 39(7), 1267-1269

CODEN: ACIEF5; ISSN: 1433-7851

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 133:17665

AB The selective cleavage of  $\beta,\beta$ -carotene by a ruthenium-porphyrin  $\beta$ -cyclodextrin dimer is described.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 42 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:209679 CAPLUS

DOCUMENT NUMBER: 132:248279

TITLE: Diagnostic agents for pancreatic exocrine function

INVENTOR(S): Kohno, Tadashi; Hosoi, Isaburo; Ohshima, Junko; Shibata, Kunihiro; Ito, Asuka

PATENT ASSIGNEE(S): Tokyo Gas Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 28 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 989137	A2	20000329	EP 1999-307554	19990924
EP 989137	A3	20001011		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000159773	A2	20000613	JP 1999-261979	19990916
JP 3669880	B2	20050713		
JP 2000159810	A2	20000613	JP 1999-263300	19990917
NZ 337946	A	20011130	NZ 1999-337946	19990921
NZ 507949	A	20020301	NZ 1999-507949	19990921
AU 9948865	A1	20000330	AU 1999-48865	19990922
AU 755444	B2	20021212		
US 6254851	B1	20010703	US 1999-401739	19990923
CA 2283518	C	20000325	CA 1999-2283518	19990924
CA 2283518	AA	20000325		
CA 2451924	AA	20000325	CA 1999-2451924	19990924
NO 9904685	A	20000327	NO 1999-4685	19990924
EP 1386934	A1	20040204	EP 2003-77521	19990924
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
US 6905668	B1	20050614	US 2000-589419	20000607
AU 769555	B2	20040129	AU 2001-89240	20011105
US 2005019252	A1	20050127	US 2004-926563	20040825
US 2005019253	A1	20050127	US 2004-926564	20040825
US 2005032148	A1	20050210	US 2004-926544	20040825
JP 2006052417	A2	20060223	JP 2005-319212	20051102
PRIORITY APPLN. INFO.:				
			JP 1998-271252	A 19980925
			JP 1998-271253	A 19980925
			JP 1999-261979	A 19990916
			JP 1999-263300	A 19990917
			NZ 1999-337946	A1 19990921
			AU 1999-48865	A3 19990922
			US 1999-401739	A3 19990923
			CA 1999-2283518	A3 19990924
			EP 1999-307554	A3 19990924
			US 2000-589419	A3 20000607

AB The present invention provides a  $^{13}\text{C}$ -labeled oligosaccharide or polysaccharide or a salt thereof excluding U- $^{13}\text{C}$ -maltose,  $^{13}\text{C}$ -starch, 1- $^{13}\text{C}$ -maltotetraose and 1- $^{13}\text{C}$ -amylose; a derivative of the  $^{13}\text{C}$ -labeled oligosaccharide or polysaccharide or salt thereof; a  $^{13}\text{C}$ -labeled inclusion complex or a salt thereof, which comprises a **cyclodextrin** or a modified derivative thereof as a host mol.; a  $^{13}\text{C}$ - or  $^{14}\text{C}$ -labeled fluorescein ester compound or a salt thereof; and a diagnostic agents for pancreatic exocrine function comprising these compds.  $^{13}\text{C}$ - or  $^{14}\text{C}$ -labeled. These reagents provide a test, particularly a breath test, which imparts a low stress on subjects and gives the results in a short period of time.

L23 ANSWER 43 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:200845 CAPLUS

DOCUMENT NUMBER: 133:101647

TITLE: **Carotenoid:methyl- $\beta$ -cyclodextrin** formulations: an improved method for supplementation of cultured cells

AUTHOR(S): Pfitzner, I.; Francz, P. I.; Biesalski, H. K.

CORPORATE SOURCE: Department of Biological Chemistry and Nutrition, University of Hohenheim, Hohenheim, D-70593, Germany

SOURCE: Biochimica et Biophysica Acta, General Subjects (2000), 1474(2), 163-168

CODEN: BBGSB3; ISSN: 0304-4165

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A physiol., water-soluble complex of **carotenoids** with methyl- $\beta$ - **cyclodextrin** (M $\beta$ CD) was developed for the purpose of cell supplementation. Bioavailability, cytotoxicity and stability of the formulations were compared to **carotenoid** solns. in organic solvents (THF/DMSO (1:1), THF and ethanol). The stability of the different **carotenoid** solns. (0.5  $\mu\text{M}$ ) under cell culture conditions was determined by measuring absorbance 1 and 7 days after treatment. To determine the availability of  $\beta$ - **carotene** (BC), human skin fibroblasts were incubated for up to 8 days with 5  $\mu\text{M}$  BC in M $\beta$ CD or THF/DMSO and the cellular and medium BC contents were determined by HPLC anal. Depending on the solubilizer, different orders of stability were found. M $\beta$ CD formulation: BC > **zeaxanthin** > **lutein** > lycopene. Organic solvents: **zeaxanthin** > **lutein** > lycopene > BC. Two days after supplementation with 5  $\mu\text{M}$  BC in M $\beta$ CD, cellular BC levels reached a maximum of  $140 \pm 11$  pmol/ $\mu\text{g}$  DNA, leveling off to  $100 \pm 15$  pmol/ $\mu\text{g}$  DNA until day 8. Incubation with BC dissolved in THF/DMSO resulted in a lower BC uptake of  $105 \pm 14$  pmol/ $\mu\text{g}$  DNA and  $64 \pm 20$  pmol/ $\mu\text{g}$  DNA resp. No cytotoxic effects of these formulations were detected. The results show that the M $\beta$ CD formulation is an improved method for investigations of **carotenoids** and other lipophilic compds. in in vitro test systems compared to methods using organic solvents.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 44 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:5812 CAPLUS

DOCUMENT NUMBER: 132:307496

TITLE: Stability of  $\beta$ - **carotene** during processing and storage of sterilized milk

AUTHOR(S): Fursova, S. A.; Shatnyuk, L. N.; Risnik, V. V.; Leontieva, E. V.; Biryukova, Z. A.; Kovalenko, L. M.; Panteleeva, O. N.

CORPORATE SOURCE: Inst. Pitan., RAMN, Moscow, Russia

SOURCE: Voprosy Pitaniya (1999), 68(4), 21-23

CODEN: VPITAR; ISSN: 0042-8833

PUBLISHER: Izdatel'stvo Media Sfera

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB An overview is given of the use and stability of  $\beta$ - **carotene** in sterilized milk products, including the use of different forms of  $\beta$ - **carotene** (e.g., a **cyclodextrin** complex and a fat-soluble microbiol. extract), UHT sterilization treatments, ascorbic acid enrichment, and packaging options. Provita sterilized milk with different levels of fat and a  $\beta$ - **carotene** content of 0.25 mg/100 g is emphasized.

L23 ANSWER 45 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:659426 CAPLUS

DOCUMENT NUMBER: 131:283332

TITLE: A metalloporphyrin catalyst that oxidizes steroids and other substrates with catalytic turnover  
 INVENTOR(S): Breslow, Ronald; Yang, Jerry; Bartolo, Gabriele  
 PATENT ASSIGNEE(S): The Trustees of Columbia University In the City of New York, USA  
 SOURCE: PCT Int. Appl., 40 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9951644	A1	19991014	WO 1999-US7758	19990408
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6103892	A	20000815	US 1998-57417	19980408
AU 9935512	A1	19991025	AU 1999-35512	19990408
EP 1084148	A1	20010321	EP 1999-917373	19990408
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.:			US 1998-57417	A 19980408
			WO 1999-US7758	W 19990408

OTHER SOURCE(S): CASREACT 131:283332

AB The present invention provides a  $\beta$ -cyclodextrin-containing metalloporphyrin catalyst represented by structure I (R=6-deoxy-6-mercapto- $\beta$ -cyclodextrin attached to the metalloporphyrin via the mercapto group). Synthesis of I was achieved by reaction of 6-deoxy-6-mercapto- $\beta$ -cyclodextrin and 5,10,15,20-tetrakis(pentafluorophenyl)-21H,23H-porphine with K<sub>2</sub>CO<sub>3</sub> (95% yield) followed by reaction with MnCl<sub>2</sub>. With the stabilized fluorocatalyst, both high conversion and high turnover in selective hydroxylation of an androstenediol derivative can be achieved. As the geometry of such complexes is varied, other selective hydroxylations of interest may be achieved, mimicking the selectivities achieved by the enzymes of the cytochrome P 450 group.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 46 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:481647 CAPLUS  
 DOCUMENT NUMBER: 131:142179  
 TITLE: Plant extracts for removal of hazardous substances  
 INVENTOR(S): Sakata, Shigenobu; Hayashi, Yukiko; Miyake, Shigeo  
 PATENT ASSIGNEE(S): Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11209741	A2	19990803	JP 1998-42746	19980119
PRIORITY APPLN. INFO.:			JP 1998-42746	19980119
AB Hazardous and carcinogenic substances such as dioxin are removed with fermentation liquid manufactured from plant material such as evergreen shrub and chems. The chems. comprise sugars such as monosaccharide, vitamin, amino acid, protein, mineral water, and mucopolysaccharide. The fermentation liquid is useful for manufacturing food additive, cosmetic, etc.				

L23 ANSWER 47 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:363743 CAPLUS  
 DOCUMENT NUMBER: 131:59052  
 TITLE: Letter: ready detection of  $\beta$ -carotene from large aggregates of cyclodextrin complexes in water solution by laser

desorption/ionization mass spectrometry with and without matrix assistance

AUTHOR(S): Mele, Andrea; Panzeri, Walter; Selva, Antonio; Canu, Emanuele

CORPORATE SOURCE: CNR-Centro di Studio sulle Sostanze Organiche Naturali, Dipartimento di Chimica del Politecnico, Milan, I-20131, Italy

SOURCE: European Mass Spectrometry (1999), 5(1), 7-10  
CODEN: EMSPEW; ISSN: 1356-1049

PUBLISHER: IM Publications

DOCUMENT TYPE: Journal

LANGUAGE: English

AB  $\beta$ - **Carotene** forms large aggregates (micelles) with  $\beta$ - and  $\gamma$ - **cyclodextrin** in water. The components of such aggregates can be easily and quickly analyzed by using laser desorption/ionization time-of-flight mass spectrometry (LDI-TOF-MS). The use of a suitable matrix (2,5-dihydroxybenzoic acid, DHB) allows one to detect both **carotene** and **cyclodextrins**, whereas LDI-MS without matrix can be exploited for the selective detection of **carotene**. On this basis, an anal. strategy can be developed for the assessment of the composition of water soluble **carotene/cyclodextrin** systems and the investigation on the repartition of the components in the presence of organic solvents.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 48 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:717269 CAPLUS

DOCUMENT NUMBER: 130:4824

TITLE: Stabilization and solubilization of lipophilic natural colorants with **cyclodextrins**

AUTHOR(S): Szente, Lajos; Mikuni, Katsuhiko; Hashimoto, Hitoshi; Szejtli, Jozsef

CORPORATE SOURCE: CYCLOLAB Ltd., Budapest, Hung.

SOURCE: Journal of Inclusion Phenomena and Molecular Recognition in Chemistry (1998), 32(1), 81-89  
CODEN: JIMCEN; ISSN: 0923-0750

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The paper provides data on the practical utilization of the benefits of the mol. encapsulation of natural colorants by **cyclodextrins**. Exptl. results on the stability of **cyclodextrin** complexed curcumin, curcuma oleoresin,  $\beta$ - **carotene**, and **carotenoid** oleoresins against light, heat, and oxygen prove the benefits of mol. encapsulation of colorants. The parent  $\beta$ - **cyclodextrin** was most effective for the curcumins, while the stability of **carotenoids** was greater with  $\alpha$ - **cyclodextrin** complexation. Methylated  $\beta$ - **cyclodextrin** was found to be the most potent solubilizing agent for both **carotenoids** and curcuminoids.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 49 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:700793 CAPLUS

DOCUMENT NUMBER: 130:66694

TITLE: Non-covalent associations of cyclomalto-oligosaccharides (**cyclodextrins**) with trans- $\beta$ - **carotene** in water: evidence for the formation of large aggregates by light scattering and NMR spectroscopy

AUTHOR(S): Mele, Andrea; Mendichi, Raniero; Selva, Antonio

CORPORATE SOURCE: CNR-Centro di Studio sulle Sostanze Organiche Naturali, Dipartimento di Chimica del Politecnico di Milano, Milan, I-20131, Italy

SOURCE: Carbohydrate Research (1998), 310(4), 261-267  
CODEN: CRBRAT; ISSN: 0008-6215

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The preparation of title **cyclodextrin** inclusion complexes with **carotene** is reported. Light scattering and NMR expts. provide evidence for the formation of large aggregates, like micelles, from  $\beta$ - **carotene** complexes with  $\beta$ - and  $\gamma$ - **cyclodextrin** in water. High-resolution NMR spectra of the system

$\gamma$ - cyclodextrin/ $\beta$ - carotene in D2O point out  
 guest-induced chemical shift variation of the sugar protons, thus suggesting  
 host-guest interaction in solution

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 50 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:688196 CAPLUS

DOCUMENT NUMBER: 130:114851

TITLE: Study on inclusion complex of  $\beta$ -  
**cyclodextrin** and  $\beta$ - **carotene**  
 A00: The factors affecting the main characteristics of  
 $\beta$ - **carotene** inclusion complex  
 ( $\beta$ -C-IC) in the preparation procedures were  
 investigated.

AUTHOR(S): Liang, Tiantian; Chen, Zhiqun; Hu, Fuqiang; Zhou,  
 Meihua

CORPORATE SOURCE: Zhejiang Pharmaceutical Association, Hangzhou, 310006,  
 Peop. Rep. China

SOURCE: Zhongguo Yaoxue Zazhi (Beijing) (1998), 33(9), 543-545  
 CODEN: ZYZAEU; ISSN: 1001-2494

PUBLISHER: Zhongguo Yaoxuehui

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB  $\beta$ -C-IC was prepared by copptn. and grinding resp. using the  $\beta$ -  
**cyclodextrin** ( $\beta$ -CD) as a carrier. The effects of preparation  
 techniques and the influence of anti-oxidant on encapsulation rate and  
 yield rate were studied. The DSC patterns of the grinding products were  
 measured with thermal analyzer. The percentage incorporation of  $\beta$ -C  
 was assessed by spectrophotometry. The results showed that  $\beta$ -C mols.  
 could be included into the cavity of  $\beta$ -CD by a grinding precess using  
 DSC. The encapsulation rate and yield were significantly raised by a  
 grinding process and more by adding some anti-oxidant in this procedure.  
 $\beta$ -C-IC prepared in our laboratory could be expected to apply industry manufacture  
 as a carrier of drug.

L23 ANSWER 51 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:636241 CAPLUS

DOCUMENT NUMBER: 130:3173

TITLE: Preparation and solubility of phosphorylated  $\beta$ -  
**cyclodextrins**

AUTHOR(S): Lee, Sang-Ah; Lim, Seung-Taik

CORPORATE SOURCE: Graduate Sch. Biotechnol., Center Advanced Food  
 Science Technol., Korea Univ., Seoul, 136-701, S.  
 Korea

SOURCE: Cereal Chemistry (1998), 75(5), 690-694  
 CODEN: CECHAF; ISSN: 0009-0352

PUBLISHER: American Association of Cereal Chemists

DOCUMENT TYPE: Journal

LANGUAGE: English

AB  $\beta$ - **Cyclodextrin** (CD) was phoshorylated with phosphoryl  
 chloride in aqueous alkaline media at different temps. and pH values. The  
 phosphorylated **cyclodextrin** (PCD) was characterized with respect  
 to phosphorus contents and positions of substitutions as determined by  $^{31}\text{P}$ -NMR  
 spectroscopy. Reaction of CD with equimolar  $\text{POCl}_3$  for 3 h at pH 12 and  
 $45^\circ\text{C}$  yielded a PCD with a phosphorus content of 5.67%. The ratio  
 of mono and diphosphate esters increased when the reaction temperature was  
 raised from 25 to  $60^\circ\text{C}$ . The monoesterified phosphate groups were  
 mainly located at C-6 of the anhydroglucose units when the reaction pH was  
 11 or 12. Reactions at pH 10, however, led to a higher degree of  
 substitutions at C-2 than at C-6. Phosphorylation enhanced the water  
 solubility of CD. Simultaneously, solubility of the PCD in 25% ethanol in water was  
 much greater than unsubstituted CD (22.3 vs. 2.8%). The PCD enhanced the  
 water solubility of nonpolar compds., such as  $\beta$ - **carotene**.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 52 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:591175 CAPLUS

DOCUMENT NUMBER: 129:260679

TITLE: A synthetic receptor for  $\beta$ , $\beta$ -  
**carotene**. Towards an enzyme mimic for central  
 cleavage

AUTHOR(S): French, Richard R.; Wirz, Jakob; Woggon, Wolf-Dietrich

CORPORATE SOURCE: Institut Organische Chemie, Universitaet Basel, Basel,  
 CH-4056, Switz.

SOURCE: Helvetica Chimica Acta (1998), 81(8), 1521-1527  
 CODEN: HCACAV; ISSN: 0018-019X  
 PUBLISHER: Verlag Helvetica Chimica Acta AG  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 129:260679

AB A report on the synthesis of a porphyrin-bridged bis-**cyclodextrin** as a receptor for  $\beta,\beta$ - **carotene**, and on the binding interaction between these compds., which yields an inclusion complex. The **cyclodextrin** dimer was obtained via condensation of an appropriate 4,4'-(porphyrin-5,15-diyl)bispheol with 6A-deoxy-6A-iodo- $\beta$ -**cyclodextrin** in the presence of  $\text{Cs}_2\text{CO}_3$ . Fluorescence studies of the binding interaction between the dimer and  $\beta,\beta$ -**carotene** gave a binding constant  $K_a$  of  $2.4 \cdot 10^6 \text{ M}^{-1}$ .

L23 ANSWER 53 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:466875 CAPLUS

DOCUMENT NUMBER: 129:199085

TITLE: Oxidative damage induced by the fullerene C60 on

photosensitization in rat liver microsomes

AUTHOR(S): Kamat, Jayashree P.; Devasagayam, Thomas P. A.;  
 Priyadarsini, K. I.; Mohan, Hari; Mittal, Jai P.

CORPORATE SOURCE: Cell Biology Division, Bhabha Atomic Research Centre,  
 Mumbai, 400 085, India

SOURCE: Chemico-Biological Interactions (1998), 114(3),  
 145-159

CODEN: CBINAB; ISSN: 0009-2797

PUBLISHER: Elsevier Science Ireland Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors have examined the ability of a commonly used fullerene, C60, to induce oxidative damage on photosensitization using rat liver microsomes as model membranes. When C60 was incorporated into rat liver microsomes in the form of its **cyclodextrin** complex and exposed to UV or visible light, it induced significant oxidative damage in terms of lipid peroxidn. as assayed by thiobarbituric acid reactive substances (TBARS), lipid hydroperoxides and conjugated dienes, and damage to proteins as assessed by protein carbonyls and loss of the membrane-bound enzymes. The oxidative damage induced was both time- and concentration-dependent. C60 plus light-induced lipid peroxidn. was significantly inhibited by the quenchers of singlet oxygen ( $^{1}\text{O}_2$ ),  $\beta$ - **carotene** and sodium azide, and deuteration of the buffer-enhanced peroxidn. These observations indicate that C60 is an efficient inducer of peroxidn. and is predominantly due to  $^{1}\text{O}_2$ . Biol. antioxidants such as glutathione, ascorbic acid and  $\alpha$ -tocopherol significantly differ in their ability to inhibit peroxidn. induced by C60. The authors' studies, hence, indicate that C60, on photosensitization, can induce significant lipid peroxidn. and other forms of oxidative damage in biol. membranes and that this phenomenon can be greatly modulated by endogenous antioxidants and scavengers of reactive oxygen species.

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 54 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:580666 CAPLUS

DOCUMENT NUMBER: 127:181148

TITLE: Liquid compositions for adrenal cortex function  
 promotion and infection prevention

INVENTOR(S): Sakata, Shigenobu; Tatsumi, Jiro; Fukai, Masaru

PATENT ASSIGNEE(S): Handa, Shigenobu, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09176029	A2	19970708	JP 1995-354770	19951226
PRIORITY APPLN. INFO.:			JP 1995-354770	19951226

AB Liquid compns. for adrenal cortex function promotion and infection prevention comprise Tilia exts. and substances selected from e.g. iron ammonium citrate, salicylic acid and citric acid. The compns. also can be incorporated into cosmetics or foods.

L23 ANSWER 55 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1997:366870 CAPLUS  
DOCUMENT NUMBER: 127:50818  
TITLE: A study by mass spectrometry on the volatility of  
trans- $\beta$ - **carotene** after complexation  
with  $\beta$ - **cyclodextrin** in water  
AUTHOR(S): Mele, Andrea; Selva, Antonio  
CORPORATE SOURCE: CNR-Centro Studio Sostanze Organiche Naturali, Dip.  
Chimica Politecnico, Milan, I-20131, Italy  
SOURCE: European Mass Spectrometry (1997), 3(2), 161-163  
CODEN: EMSPEW; ISSN: 1356-1049  
PUBLISHER: IM Publications  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Volatility of the 1:1 inclusion complex of  $\beta$ - **carotene** and  
 $\beta$ - **cyclodextrin** was studied by mass spectrometry. The  
vaporization temperature of free  $\beta$ - **carotene** was in the range of  
170-210° as compared to 210-240° for the complex.  
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 56 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1997:275188 CAPLUS  
DOCUMENT NUMBER: 126:342682  
TITLE: Composition and functional properties of cholesterol  
reduced egg yolk  
AUTHOR(S): Awad, A. C.; Bennink, M. R.; Smith, D. M.  
CORPORATE SOURCE: Department of Food Science and Human Nutrition,  
Michigan State University, East Lansing, MI,  
48824-1224, USA  
SOURCE: Poultry Science (1997), 76(4), 649-653  
CODEN: POSCAL; ISSN: 0032-5791  
PUBLISHER: Poultry Science Association, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The composition and functional properties of cholesterol reduced egg yolk  
(CREY) were compared to those of control egg yolk (EY). The CREY was  
prepared by absorbing cholesterol with  $\beta$ - **cyclodextrin** after  
dilution and dissociation of granules at pH 10.5. The CREY contained less lipid  
and protein and more carbohydrate and ash than EY. Egg lipids were  
fractionated into triglycerides, cholesterol esters, free cholesterol,  
phosphatidyl choline, and phosphatidyl ethanolamine. Free and esterified  
cholesterol in CREY were reduced by 91.6 and 94.4%, resp. Triglycerides  
were the major lipid class in CREY. The CREY contained more oleic acid  
and less linoleic acid than the control. Protein solubility in 0.1 and 0.6 M  
NaCl and sponge cake volume did not differ. The composition of proteins soluble in  
0.6 M NaCl in both egg prepns. were similar as determined by SDS-polyacrylamide  
gel electrophoresis. The electrophoretic profiles of proteins soluble in 0.1  
M NaCl were similar, except that lipovitellin from EY was insol. under  
these conditions. The CREY was less yellow than EY, as indicated by  
 $\beta$ - **carotene** concns. and Hunter b values. Thus,  $\beta$ -  
**cyclodextrin** can be used to produce a low cholesterol egg product  
with compositional and functional properties similar to EY.

L23 ANSWER 57 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1997:121431 CAPLUS  
DOCUMENT NUMBER: 126:135663  
TITLE: Process for preparing encapsulated water soluble  
 $\beta$ - **carotene**  
INVENTOR(S): Fortier, Nancy Elaine  
PATENT ASSIGNEE(S): Procter and Gamble Co., USA  
SOURCE: PCT Int. Appl., 8 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640262	A2	19961219	WO 1996-US6981	19960516
WO 9640262	A3	19970522		

W: BR, CA, JP, MX

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: US 1995-485328 A 19950607

AB A process for preparing a powdered water soluble  $\beta$ - **carotene** is

disclosed. The **carotenoid** composition is prepared by combining an aqueous solution of **cyclodextrin** or derivatized **cyclodextrins**, and a solution of  **$\beta$ -carotene**,  **$\beta$ -carotene** derivs. or mixts. thereof, dissolved in an organic solvent. The  **$\beta$ -carotene** solution is added to the **cyclodextrin** solution with stirring for a time sufficient to remove the organic solvent. Excess  **$\beta$ -carotene** is removed and the remaining solution is evaporated to dryness. Hydroxypropyl  **$\beta$ -cyclodextrin**, acetone, and  $\alpha$ -tocopherol were used according to above procedure to obtain a water soluble  **$\beta$ -carotene**.

L23 ANSWER 58 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:718316 CAPLUS  
DOCUMENT NUMBER: 125:339053  
TITLE: Preparation of polyanionic **cyclodextrin** compounds having cellular growth modulating activity  
INVENTOR(S): Joullie, Madeleine; Weisz, Paul B.; Zhang, Zhongta  
PATENT ASSIGNEE(S): University of Pennsylvania, USA  
SOURCE: PCT Int. Appl., 61 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 10  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9631220	A1	19961010	WO 1996-US4573	19960403
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
US 5760015	A	19980602	US 1995-416107	19950403
AU 9656628	A1	19961023	AU 1996-56628	19960403
AU 692389	B2	19980604		
EP 824352	A1	19980225	EP 1996-913777	19960403
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 11514388	T2	19991207	JP 1996-530457	19960403
NO 9704572	A	19971202	NO 1997-4572	19971002
PRIORITY APPLN. INFO.:			US 1995-416107	A 19950403
			US 1988-145407	B2 19880119
			US 1989-295638	B1 19890110
			US 1989-434659	A2 19891109
			US 1990-480407	A2 19900215
			US 1991-691168	B1 19910424
			US 1991-790592	B1 19911112
			US 1992-900592	B1 19920618
			US 1994-345011	A2 19941123
			WO 1996-US4573	W 19960403

AB Preparation of polyanionic, substituted **cyclodextrin** (CDs) having cellular growth modulating activity are disclosed. The invention further provides CDs having anionic groups on one side of the CD mol. To a solution of 2.03 g of heptakis(6-octanesulfide-6-deoxy)- **$\beta$ -cyclodextrin** (preparation given) in 700 mL pyridine was added 6.36 g of sulfur trioxide pyridine complex and stirred at 100° for 18 h. Pyridine was evaporated to precipitate a solid, which was separated and purified to obtain heptakis(6-octanesulfide-6-deoxy)- **$\beta$ -cyclodextrin** polysulfate (I). The ID50 of I for the inhibition of proliferation of human umbilical vein smooth muscle cells was 0.1-1.0 mg/mL.

L23 ANSWER 59 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:438000 CAPLUS  
DOCUMENT NUMBER: 125:96112  
TITLE: Decolorized **carotenoid-cyclodextrin** complexes  
INVENTOR(S): Schwartz, Joel L.; Shklar, Gerald; Sikorski, Christopher  
PATENT ASSIGNEE(S): Nutritech, Inc., USA  
SOURCE: PCT Int. Appl., 37 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 4

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9614850	A1	19960523	WO 1995-US14055	19951103
W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
WO 9513047	A1	19950518	WO 1994-US13050	19941114
W: CA				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9540174	A1	19960606	AU 1995-40174	19951103
PRIORITY APPLN. INFO.:				
			US 1994-339018	A 19941114
			WO 1994-US13050	A 19941114
			US 1993-152214	A 19931112
			WO 1995-US14055	W 19951103

AB Complexes of  $\beta$ - **carotene** with **cyclodextrin** are described, having reduced color intensity and a shift of color to tones more neutral than the deep red of uncomplexed  $\beta$ - **carotene**. When these complexes are added to topical compns. such as typical skin cream bases in amts. of 1.0 % weight/volume  $\beta$ - **carotene**, the result is a cream having a pinkish to beige color which is cosmetically acceptable, as opposed to the mustard orange to red color seen in creams containing like amts. of uncomplexes  $\gamma$ - **carotene**.  $\beta$ - **Carotene**- $\beta$ - **cyclodextrin** complex (1:1) was prepared and used in com. available creams (e.g. Ponds cream, Noxzema).

L23 ANSWER 60 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1996:184209 CAPLUS  
 DOCUMENT NUMBER: 124:230169  
 TITLE: Preservation of young rice plant  
 INVENTOR(S): Okii, Mitsuyoshi  
 PATENT ASSIGNEE(S): Naasarii Tekunorogiii Kk, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08009811	A2	19960116	JP 1994-152457	19940704
PRIORITY APPLN. INFO.:			JP 1994-152457	19940704

AB Rice young plant or seedling is preserved in a inorg. salt-containing medium having an osmotic pressure of 5-120 mOSMOL/kg. The preservation medium further contains inhibitors such as ancymidol to extension growth of the young plant. The preserved rice young can be further grown to mature plant by the addition of growth promoting materials such as 1,6-diaminehexane.

L23 ANSWER 61 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1996:71430 CAPLUS  
 DOCUMENT NUMBER: 124:155977  
 TITLE: **Cyclodextrin** complexation  
 INVENTOR(S): Loftsson, Thorsteinn  
 PATENT ASSIGNEE(S): Cyclops h.f., Iceland  
 SOURCE: U.S., 31 pp. Cont.-in-part of U.S. 5,324,718.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5472954	A	19951205	US 1994-240510	19940511
US 5324718	A	19940628	US 1992-912853	19920714
EP 579435	A1	19940119	EP 1993-305280	19930706
EP 579435	B1	19990317		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
PRIORITY APPLN. INFO.:			US 1992-912853	A2 19920714

EP 1993-305280 A 19930706

AB The invention provides a method for enhancing the complexation of a **cyclodextrin** with a lipophilic and/or water-labile active ingredient which is a drug, cosmetic additive, food additive or agrochem., comprising combining from about 0.1 to about 70% (weight/volume) of a **cyclodextrin**, from about 0.001 to about 5% (weight/volume) of a pharmacol. inactive water-soluble polymer acceptable for use in a pharmaceutical, cosmetic, food or agricultural composition, and said lipophilic and/or water-labile active ingredient in an aqueous medium, the polymer and **cyclodextrin** being dissolved in the aqueous medium before the active ingredient is added, the aqueous medium which comprises the polymer and **cyclodextrin** being maintained at 30-150° for 0.1-100 h before, during and/or after the active ingredient is added, optionally followed by removal of water. Related methods, co-complexes of active ingredient/**cyclodextrin**/polymer, pharmaceutical, cosmetic, food and agricultural compns. and **cyclodextrin**/polymer complexing agents are also provided.

L23 ANSWER 62 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:58484 CAPLUS

DOCUMENT NUMBER: 124:197646

TITLE: **Cyclodextrins**: a new tool for the controlled lipid depletion of thylakoid membranes

AUTHOR(S): Rawlyer, A.; Siegenthaler, P. A.

CORPORATE SOURCE: Neuchatel, 7, Switz.

SOURCE: Biochimica et Biophysica Acta, Biomembranes (1996), 1278(1), 89-97

CODEN: BBBMBS; ISSN: 0005-2736

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB **Cyclodextrins** (CDs) have been used in a controlled lipid depletion of thylakoid membranes avoiding the use of either detergents or lipolytic enzymes. Spinach thylakoid membranes were first treated with different CDs under various conditions. After removal of the CDs by washing, the amts. of mono- and digalactosyldiacylglycerol (MGDG and DGDG), sulfoquinovosyldiacylglycerol (SQDG) and phosphatidylglycerol (PG), protein, pigment and plastoquinone remaining in the membranes were determined. The main results, obtained with  $\alpha$ -CD and heptakis-(2,6-di-O-methyl)- $\beta$ -CD (DM- $\beta$ -CD), were as follows. (1) Acyl lipids were removed from thylakoid membranes by both CDs (DM- $\beta$ -CD being more efficient than  $\alpha$ -CD); the extent of removal depended on both CD and chlorophyll concns. (2)  $\alpha$ -CD presented a higher selectivity towards lipid classes than did DM- $\beta$ -CD, but in both cases the removal order was SQDG>PG>MGDG>DGDG. (3)  $\alpha$ -CD showed a preference for those lipids containing saturated 16-carbon acyl chains whereas DM- $\beta$ -CD was essentially insensitive to the fatty acid composition of the lipids. (4) The protein, chlorophyll and **carotenoid** contents of thylakoids were not affected by CD treatments. (5) Plastoquinones were removable but in small amts. only and with a low efficiency (DM- $\beta$ -CD> $\alpha$ -CD). (6) For all lipid classes, the extent of lipid removal was higher at 0° than at 20°. (7) The presence of MgCl<sub>2</sub> reduced the removal of PG and SQDG but did not affect galactolipid depletion levels. (8) Stable lipid depletion levels in thylakoid membranes were reached after 5-10 min of CD treatment at 0°. (9) Of the four CDs tested, only three ( $\alpha$ -CD,  $\beta$ -CD, and DM- $\beta$ -CD) promoted lipid depletion whereas one (hydroxypropyl- $\beta$ -CD) failed completely to do so. It is concluded that CD-mediated lipid removal provides a valuable and versatile tool to achieve controlled and specific lipid depletions in biol. membranes. A few examples of the consequences of a CD-induced lipid depletion on fluorescence and electron transport properties of thylakoids are given to show the usefulness of CDs in the investigation of structure-function relationships in photosynthetic membranes.

L23 ANSWER 63 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:991490 CAPLUS

DOCUMENT NUMBER: 124:111105

TITLE: C60-sensitized, singlet oxygen-induced lipid peroxidation in rat liver microsomes

AUTHOR(S): Priyadarsini, K. I.; Mohan, H.; Mittal, J. P.; Kamat, J. P.; Devasagayam, T. P. A.

CORPORATE SOURCE: Chem. Group, Bhabha Atomic Res. Cent., Bombay, 400085, India

SOURCE: Proceedings - Electrochemical Society (1995), 95-10(Proceedings of the Symposium on Recent Advances in the Chemistry and Physics of Fullerenes and Related

Materials, 1995), 468-84  
 CODEN: PESODO; ISSN: 0161-6374  
 Electrochemical Society

PUBLISHER:  
 DOCUMENT TYPE:  
 LANGUAGE:

Journal  
 English

AB To examine the biol. effects of C60 we have assessed the membrane damage induced using rat liver microsomes as model systems. A suitable derivative, in the form of  $\gamma$ - **cyclodextrin** complex was incorporated into microsomes during ultracentrifugation. For photoexcitation, the microsomes were exposed to light source from low pressure mercury lamp. The resulting oxidative damage, in terms of lipid peroxidn., was assayed by three parameters, namely thiobarbituric acid reactive substances, lipid hydroperoxides and conjugated dienes. A significant increase in peroxidn. was observed in microsomes containing C60. Peroxidn. induced was both time- and concentration-dependent, and was accompanied by loss of membrane-bound enzymes. Since peroxidn. was significantly inhibited by the singlet oxygen quenchers  $\beta$ - **carotene** and sodium azide, it is reasonable to presume that major part of the peroxidn. is due to singlet oxygen.

L23 ANSWER 64 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:843506 CAPLUS

DOCUMENT NUMBER: 123:350044

TITLE: Novel liposome based systems for the protection of photolabile drugs

AUTHOR(S): Loukas, Yannis L.; Gregoriadis, Gregory

CORPORATE SOURCE: School Pharmacy, University London, London, WC1N 1AX, UK

SOURCE: Proceedings of the International Symposium on Controlled Release of Bioactive Materials (1995), 22nd, 438-9

CODEN: PCRMEY; ISSN: 1022-0178

PUBLISHER: Controlled Release Society, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Photolabile agents may be protected from UV light by incorporating them (as such or in the form of **cyclodextrin** complexes) into a liposome-based multicomponent system. This functions through a series of barriers to light and the presence of an antioxidant, all assembled within the bilayer structure which, by itself, also appears to absorb light.

L23 ANSWER 65 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:735652 CAPLUS

DOCUMENT NUMBER: 123:122762

TITLE: Decolorized **carotenoid-cyclodextrin** complexes

INVENTOR(S): Schwartz, Joel L.; Shklar, Gerald; Sikorski, Christopher

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9513047	A1	19950518	WO 1994-US13050	19941114
W: CA				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
WO 9614850	A1	19960523	WO 1995-US14055	19951103
W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9540174	A1	19960606	AU 1995-40174	19951103
PRIORITY APPLN. INFO.:			US 1993-152214	A 19931112
			US 1994-339018	A 19941114
			WO 1994-US13050	A 19941114
			WO 1995-US14055	W 19951103

AB Complexes of  $\beta$ - **carotene** with **cyclodextrin** are described, having reduced color intensity and a shift of color to tones more neutral than the deep red uncomplexed  $\beta$ - **carotene**.

When these complexes are added to topical compns. such as typical skin cream bases in amts. up to 1.0% weight/volume  $\beta$ - **carotene**, the result is a cream having a pinkish to beige color which is cosmetically acceptable, as opposed to the mustard orange to red color in creams containing like amts. of uncomplexed  $\beta$ - **carotene**. For example,  $\beta$ - **carotene** in methylene chloride was treated with an aqueous solution of  $\beta$ - **cyclodextrin** to give a complex, which was mixed with a cream base.

L23 ANSWER 66 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:588123 CAPLUS  
DOCUMENT NUMBER: 123:286425  
TITLE: Detection of the inclusion complexes of  $\beta$ - **carotene** with **cyclodextrins** by electrospray mass spectrometry  
AUTHOR(S): Selva, Antonio; Mele, Andrea; Vago, Giorgio  
CORPORATE SOURCE: Dipartimento di Chimica del Politecnico, CNR-Centro di Studio sulle Sostanze Organiche Naturali, Milan, I-20131, Italy  
SOURCE: European Mass Spectrometry (1995), 1(2), 215-16  
CODEN: EMSPEW; ISSN: 1356-1049  
PUBLISHER: IM Publications  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Inclusion reaction of  $\beta$ - **carotene** with  $\beta$ - and  $\gamma$ - **cyclodextrin** was detected by electrospray mass spectrometry.

L23 ANSWER 67 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:478413 CAPLUS  
DOCUMENT NUMBER: 122:212592  
TITLE: Solubilization of **carotenoid** pigments  
INVENTOR(S): Nosaka, Nobuyoshi; Myano, Nobuo; Asano, Mikinori  
PATENT ASSIGNEE(S): Taishoo Tekunosu Kk, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07023736	A2	19950127	JP 1993-209841	19930630
PRIORITY APPLN. INFO.:			JP 1993-209841	19930630

AB **Carotenoid** pigments utilized in foods are solubilized by **cyclodextrins** which do not produce insol. materials at neutral pH. **Carotenoid** pigments are solubilized at alkaline pH and mixed with **cyclodextrins** and the pH is brought back to neutral pH.

L23 ANSWER 68 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:248449 CAPLUS  
DOCUMENT NUMBER: 122:30239  
TITLE: Crocetin-containing coloring.  
INVENTOR(S): Tanaka, Takemi; Okemoto, Hisashi; Kuwahara, Nobuhiro  
PATENT ASSIGNEE(S): Ensuiko Sugar Refining Co., Ltd., Japan  
SOURCE: Eur. Pat. Appl., 8 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 612815	A1	19940831	EP 1993-118965	19931125
EP 612815	B1	19980930		
R: DE, FR, GB				
JP 06248193	A2	19940906	JP 1993-59422	19930225
US 5424407	A	19950613	US 1993-156810	19931122
CA 2112277	AA	19940826	CA 1993-2112277	19931223
PRIORITY APPLN. INFO.:			JP 1993-59422	A 19930225

AB A stabilized crocetin-containing colorant has as an effective component crocetin included by **cyclodextrin**. The colorant is obtained by adding an aqueous alkali solution of crocetin to pasty **cyclodextrin** and stirring the resultant mixture. Crocetin included by **cyclodextrin** is resistant against light and various chems. and may be added to food

products as a stable coloring matter. Thus, a juice base was made by adding citric acid, malic acid, and lemon juice to sugar, adding NaHCO<sub>3</sub> solution, and adjusting the pH to 7.0. Water was added to juice base in which was dissolved crocetin or crocetin- $\alpha$ - **cyclodextrin** inclusion complex, the mixts. were prepared so that absorbance at 420 nm was 0.5 and then were poured into glass containers, and the containers were sealed and allowed to stand for 1 mo in a sunny place. The degree of fading was 80% for the mixture with crocetin and only 30% for the mixture with crocetin- $\alpha$ - **cyclodextrin** inclusion complex.

L23 ANSWER 69 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:13452 CAPLUS

DOCUMENT NUMBER: 122:4734

TITLE: Solubilization of fatty acids and similar lipids by methylated **cyclodextrins**

AUTHOR(S): Szente, L.; Szejtli, J.; Kato, L.

CORPORATE SOURCE: CYCLOLAB, Cyclodextrin Res. and Dev. Lab. Ltd., Budapest, 1026, Hung.

SOURCE: Minutes Int. Symp. Cyclodextrins, 6th (1992), 340-4.

Editor(s): Hedges, Allan R. Ed. Sante: Paris, Fr.

CODEN: 60BCAL

DOCUMENT TYPE: Conference

LANGUAGE: English

AB Naturally occurring lipids were transformed into water soluble forms by using chemical modified **cyclodextrins** as solubilizers. DIMEB (2,6-dimethyl- $\beta$ CD), randomly methylated  $\beta$ CD(RAMEB) and HPBCD (2-hydroxypropyl-BCD) were compared as solubility enhancers. DIMEB and RAMEB were the most potent solubilizers for fatty acids and other studied natural lipophiles. Solid complexes were prepared via freeze-drying with an average lipid content of 2 to 5%. By dissolving these formulations clear, stable aqueous solns. are obtained. The real mol. dispersity of the fatty acids in this form was probably responsible for the very promising results obtained in the first successful in vitro cultivation of leprosy bacilli using soluble palmitic acid complexes. This findings may open a new way in the chemotherapy of leprosy.

L23 ANSWER 70 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:430536 CAPLUS

DOCUMENT NUMBER: 121:30536

TITLE: water-soluble inclusion complexes of fatty acids or their alkali metal salts with methylated **cyclodextrins**.

INVENTOR(S): Szejtli, Jozsef; Szente, Lajos; Kato, Laszlo

PATENT ASSIGNEE(S): Cyclolab Kft., Hung.

SOURCE: Hung. Teljes, 11 pp.

CODEN: HUXXBU

DOCUMENT TYPE: Patent

LANGUAGE: Hungarian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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HU 63447	A2	19930830	HU 1992-567	19920221
HU 209658	B	19941028		

PRIORITY APPLN. INFO.: HU 1992-567 19920221

AB The title complexes are prepared with methylated  $\alpha$ -,  $\beta$ - or  $\gamma$ - **cyclodextrins**, preferably  $\beta$ - **cyclodextrin** containing 13-15 Me groups. The method is especially suitable in solubilizing palmitic acid for Mycobacterium leprae culture media.

L23 ANSWER 71 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:407844 CAPLUS

DOCUMENT NUMBER: 121:7844

TITLE: Colorless  $\beta$ - **carotene** preparations and manufacture of the preparations

INVENTOR(S): Murao, Tadahisa; Maruyama, Tetsuhiko; Takahashi, Yasuyuki; Komatsu, Yoshinori; Yamamoto, Yoshiro

PATENT ASSIGNEE(S): Meiji Milk Prod Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06025156	A2	19940201	JP 1991-78235	19910319

PRIORITY APPLN. INFO.: JP 1991-78235 19910319

AB Colorless  $\beta$ - **carotene** (I) prepns., useful for foods, beverages, pharmaceuticals, cosmetics, etc., are manufactured by inclusion of I with **cyclodextrin**, and addition of dyes having complementary color of the inclusion compds. **Cyclodextrin** powder (containing .apprx.30%  $\alpha$ - **cyclodextrin**) (400 g), H<sub>2</sub>O, and 800 mg I were mixed to give an inclusion compound, which was mixed with a bluish green food dye to give a colorless composition

L23 ANSWER 72 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:8059 CAPLUS

DOCUMENT NUMBER: 120:8059

TITLE: Applications of matrix-assisted techniques in plasma desorption mass spectrometry

AUTHOR(S): Tuszynski, Wilfried

CORPORATE SOURCE: Dep. Phys. Mol. Biophys., Carl von Ossietzky-Univ., Oldenburg, W-2900, Germany

SOURCE: International Journal of Mass Spectrometry and Ion Processes (1993), 126, 151-6  
CODEN: IJMPDN; ISSN: 0168-1176

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Analyte-analyte interactions between adsorbates on nitrocellulose are studied. The suitability of 3-aminopyridine as a matrix for carbohydrates is shown. The detection of neg. C60 ions from a femtomole sample is made possible by matrix assistance.

L23 ANSWER 73 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:602254 CAPLUS

DOCUMENT NUMBER: 119:202254

TITLE: Cosmetic beverages preparation from chlorella extract

INVENTOR(S): Tanaka, Yoshiho

PATENT ASSIGNEE(S): Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05184340	A2	19930727	JP 1992-21599	19920113

PRIORITY APPLN. INFO.: JP 1992-21599 19920113

AB The cosmetic beverages are prepared from chlorella hot water extract 30-50 mL,  $\beta$ - **carotene** 0.25-40, donariera algae enclosed in **cyclodextrin**, and cosmetic aide such as raffinose.

L23 ANSWER 74 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:229393 CAPLUS

DOCUMENT NUMBER: 118:229393

TITLE: Analysis of **carotenoids** by high-performance liquid chromatography and supercritical fluid chromatography

AUTHOR(S): Lesellier, E.; Tchaplal, A.; Marty, C.; Lebert, A.

CORPORATE SOURCE: Letiam, IUT Orsay, Plateau du Moulon, B.P. 127, Orsay, 91403, Fr.

SOURCE: Journal of Chromatography (1993), 633(1-2), 9-23  
CODEN: JOCRAM; ISSN: 0021-9673

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 98 refs. The 1st part describes the chemical structures and importance of **carotenoids** for health. Sample preparation for extracting **carotenoids** from fruits and vegetable matrixes is detailed in terms of pre-extraction treatment (enzyme inactivation, addition of antioxidants and acid neutralizers), extraction conditions with solvents or supercrit. fluids and saponification. In the 2nd part, HPLC and SFC separation methods are described. The efficiencies of different inorg. packings (silica, magnesium oxide, calcium hydroxide, alumina), bonded silica packings (cyano, octadecyl), and chiral phases (cellulose, **cyclodextrins**) are discussed. The choice of an appropriate method depending on the type of pigment to be separated (xanthophylls, **carotenes**, cis-trans isomers) is discussed. The effects of the mobile phase (specific

interactions, H bonding) and of the stationary phase (nature and type of linkage: monofunctional or polyfunctional, end-capping of residual silanols) on the solute retention are reported and explained on the basis of the differences between the chemical structures of the pigments.

L23 ANSWER 75 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:132137 CAPLUS  
DOCUMENT NUMBER: 118:132137  
TITLE: Apocarotenal or lycopene complexes with a **cyclodextrin**  
INVENTOR(S): Leuenberger, Bruno; Stoller, Hansjoerg  
PATENT ASSIGNEE(S): Hoffmann-La Roche, F., und Co. A.-G., Switz.  
SOURCE: Eur. Pat. Appl., 5 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 501267	A1	19920902	EP 1992-102587	19920217
EP 501267	B1	19980415		
R: AT, BE, CH, DE, DK, FR, GB, IT, LI, NL				
US 5221735	A	19930622	US 1992-837292	19920214
AT 165012	E	19980515	AT 1992-102587	19920217
JP 07165801	A2	19950627	JP 1992-69885	19920219
JP 3162465	B2	20010425		

PRIORITY APPLN. INFO.: CH 1991-556 A 19910225

AB Inclusion complexes of polyenes such as apocarotenal and lycopene with **cyclodextrins** ( $\alpha$ - **cyclodextrin** hydroxypropyl  $\beta$ - **cyclodextrin**) are prepared, and the complexes are soluble in water, alc. or mixts. of water-alc. Thus, 5.0 g  $\alpha$ - **cyclodextrin** was dissolved in 40 mL water and to this solution was added a solution of 0.3 g lycopene in 4 mL CHCl<sub>3</sub>. This suspension was heated at 60° and stirred for 20 min, CHCl<sub>3</sub> removed and cooled to give a solid which contained 2  $\mu$ g lycopene/mL.

L23 ANSWER 76 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:7320 CAPLUS  
DOCUMENT NUMBER: 118:7320  
TITLE: Preparation of **cyclodextrin** inclusion compounds containing  $\beta$ - **carotene** as food dyes and antioxidants  
INVENTOR(S): Murao, Tadahisa; Maruyama, Tetsuhiko; Yamamoto, Yoshiro  
PATENT ASSIGNEE(S): Meiji Milk Products Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04244059	A2	19920901	JP 1991-87168	19910128
			JP 1991-87168	19910128

PRIORITY APPLN. INFO.: JP 1991-87168 19910128  
AB The title compds., useful as food dyes and antioxidants (no data), which show orange or red color and low saturation with dispersing in liquid-phase, are prepared by high-speed stirring **cyclodextrin** solns. containing  $\alpha$ - **cyclodextrin** (I) with oily  $\beta$ - **carotene** (II). An aqueous solution of **cyclodextrins** containing I was stirred with II with high speed to give **cyclodextrin** inclusion compds., which showed good red or orange color and low saturation in H<sub>2</sub>O.

L23 ANSWER 77 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:632735 CAPLUS  
DOCUMENT NUMBER: 117:232735  
TITLE: Preparation of stable **carotenoid** pigments  
INVENTOR(S): Nakao, Masahiro; Fukui, Yuko; Fujikawa, Shigeaki  
PATENT ASSIGNEE(S): Suntory, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04153271	A2	19920526	JP 1990-275284	19901016
JP 2993724	B2	19991227		

PRIORITY APPLN. INFO.: JP 1990-275284 19901016

AB Preparation of stable **carotenoid** pigments by coupling **carotenoids** with sugars in the presence of a sugar transferase is described. The yellow **carotenoid** pigments are stable in light or acidic environment. A yellow pigment was prepared by reacting Cape jasmine yellow with dextrin in the presence of **cyclodextrin** glucanotransferase and its stability was demonstrated.

L23 ANSWER 78 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:458222 CAPLUS

DOCUMENT NUMBER: 117:58222

TITLE: Second harmonic generation in mixed **carotenoid** -fatty acid and **carotenoid-cyclodextrin** Langmuir-Blodgett films

AUTHOR(S): Dentan, V.; Blanchard-Desce, M.; Palacin, S.; Ledoux, I.; Barraud, A.; Lehn, J. M.; Zyss, J.

CORPORATE SOURCE: Cent. Natl. Etud. Telecommun., Bagneux, 92220, Fr.

SOURCE: Thin Solid Films (1992), 210-211(1-2), 221-3

CODEN: THSFAP; ISSN: 0040-6090

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The second harmonic generation properties of noncentrosym. Langmuir-Blodgett films built from mixts. of push-pull **carotenoids** and  $\omega$ -tricosenoic acid or amphiphilic **cyclodextrin** are reported. The effects of the **carotenoid** as well as of the diluent on the orientational order have been studied both in monolayers and alternate active-passive multilayers.

L23 ANSWER 79 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:241988 CAPLUS

DOCUMENT NUMBER: 116:241988

TITLE: Skin cosmetics containing liposomes comprising a light-degradable phosphatidylcholine

INVENTOR(S): Hashimoto, Akira; Kusumi, Akihiro; Yamaguchi, Kazuo

PATENT ASSIGNEE(S): Sunstar, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04029915	A2	19920131	JP 1990-136530	19900524
			JP 1990-136530	19900524

PRIORITY APPLN. INFO.:

AB Skin cosmetics contain light-degradable liposomes comprising 2-O2NC6H4CH2O2C(CH2)10CO2CH2CH[O2C(CH2)10CO2CH2C6H4NO2-2]CH2OP(O)(O-)(O(CH2)2NMe3+(I). 1,10-Decanedicarboxylic acid (II) was refluxed with SOCl2 for 3 h to give 77% II dichloride, which was treated with 2-nitrobenzyl alc. and Et3N in THF at room temperature for 11 h to give 15% II mono-2-nitrobenzyl ester. This was stirred with sn-glycero-3-phosphocholine-CdCl2 complex, DCCD, and 4-dimethylaminopyridine in CHCl3 at room temperature under dark for 4 days to give 82% I. A CHCl3 solution containing I was charged in a test tube, dried, mixed with a buffer containing vitamin C at 50° for 10 min, treated with hypersonic waves, and subjected to gel permeation chromatog. to give liposomes, which were irradiated by UV-light for 5 min to release 100% vitamin C. A lotion containing the liposomes (containing vitamin C) was formulated.

L23 ANSWER 80 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:530922 CAPLUS

DOCUMENT NUMBER: 113:130922

TITLE: Stabilization of **carotenoid** pigments in foods with flavonol glycosides and antioxidants

INVENTOR(S): Nishimura, Masato; Washino, Ken; Moriwaki, Masamitsu

PATENT ASSIGNEE(S): San-Ei Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02135070	A2	19900523	JP 1988-289643	19881115
PRIORITY APPLN. INFO.:			JP 1988-289643	19881115

AB **Carotenoid** pigments in foods are stabilized with readily water-soluble flavonol glycosides and water-soluble antioxidants. Rutin was converted into quercetin 3-O-monoglucosamide with hydrolase and the glucoside was treated with **cyclodextrin** glucanotransferase and dextrin at 50° for 40 h to give readily water-soluble flavonol glucoside. Syrup was mixed with 0.3%  $\beta$ - **carotene** emulsion 0.001, the flavonol glucoside  $5 \times 10^{-5}$ , and gallic acid  $5 \times 10^{-5}$  weight part and the mixture was irradiated with UV for 24 h to result in 65.0% residual pigment.

L23 ANSWER 81 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:213251 CAPLUS

DOCUMENT NUMBER: 112:213251

TITLE: Separation of **carotenes** on **cyclodextrin**-bonded phases

AUTHOR(S): Stalcup, Apryll M.; Jin, Heng L.; Armstrong, Daniel W.; Mazur, Paul; Derguini, Fadila; Nakanishi, Koji

CORPORATE SOURCE: Dep. Chem., Univ. Missouri, Rolla, MO, 65401, USA

SOURCE: Journal of Chromatography (1990), 499, 627-35

CODEN: JOCRAM; ISSN: 0021-9673

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The separation of **carotenoids** and retinoids on a  $\beta$ -**cyclodextrin**-bonded stationary phase with conventional mobile phases is reported. Compds. studied include  $\beta$ - **carotene** (all-trans), 15,15'-cis- $\beta$ - **carotene**, 7,8,7',8'-dihydro- $\beta$ - **carotene**,  $\alpha$ - **carotene**, lycopene, **lutein**, **zeaxanthin**, retinal, retinol, retinol palmitate, and retinol acetate. The best resolution of **carotenes** was obtained with low concns. ( $\leq 1\%$ ) of polar solvents (e.g., 2-propanol or Et acetate) in hexane or cyclohexane. Xanthophylls required much higher concns. of polar solvents. The best solvent for the resolution of **lutein** and **zeaxanthin** was found to be dichloromethane. The resolution of cis/trans-isomers and the tentative identification of other isomers present in newly synthesized **carotenoid** stds. is also reported. All trans-isomers were found to be eluted before cis-isomers.

L23 ANSWER 82 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:510847 CAPLUS

DOCUMENT NUMBER: 109:110847

TITLE: Preparation of **cyclodextrin** inclusion compounds containing  $\beta$ - **carotene** as materials for drug, food and cosmetics

INVENTOR(S): Hasebe, Kohei; Ando, Yutaka; Chikamatsu, Yoshihiro; Hayashi, Kiyoko

PATENT ASSIGNEE(S): Ichimaru Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62267261	A2	19871119	JP 1986-110162	19860514
PRIORITY APPLN. INFO.:			JP 1986-110162	19860514

AB The title compds., useful as materials for drug, food, and cosmetics, were prepared A mixture of  $\beta$ - **carotene** and  $\alpha$ -**cyclodextrin** was dissolved in H<sub>2</sub>O at 80°. The resulting inclusion compound precipitated at room temperature and was collected by filtration.

L23 ANSWER 83 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1987:533706 CAPLUS

DOCUMENT NUMBER: 107:133706

TITLE: Micro-organizational control of photochemical oxidations. XV. Rose bengal and derivatives

AUTHOR(S): Neckers, D. C.; Paczkowski, Jerzy  
 CORPORATE SOURCE: Cent. Photochem. Sci., Bowling Green State Univ.,  
 Bowling Green, OH, 43403, USA  
 SOURCE: Tetrahedron (1986), 42(17), 4671-83  
 CODEN: TETRAB; ISSN: 0040-4020  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 107:133706  
 AB Rose bengal derivs. of  $\beta$ -**cyclodextrin** artificially enhance  
 the concentration of both chemical traps and phys. quenchers of singlet oxygen by  
 including the non-polar traps in the hydrophobic central sphere of the  
 $\beta$ -**cyclodextrin** and on direct proximity to the source.  
 These microorganized systems are characterized by quenching rates greater  
 than that expected for singlet oxygen thermally diffusing to the quenching  
 sphere of the quencher. Microorganizational effects are illustrated with  
 the specific phys. quencher  $\beta$ -**carotene** and the chemical  
 quencher, anthracene.

L23 ANSWER 84 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1986:99232 CAPLUS  
 DOCUMENT NUMBER: 104:99232  
 TITLE: Microheterogeneous photooxidation  
 AUTHOR(S): Neckers, D. C.; Paczkowski, Jerzy  
 CORPORATE SOURCE: Dep. Chem., Bowling Green State Univ., Bowling Green,  
 OH, 43403, USA  
 SOURCE: Journal of the American Chemical Society (1986),  
 108(2), 291-2  
 CODEN: JACSAT; ISSN: 0002-7863  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB A microheterogeneous photooxidn. is defined as a photosensitized oxidation  
 reaction whose efficiency is enhanced beyond that of diffusion control by  
 the covalent bonding of a sensitizer to a ligand. The ligand is  
 responsible for enhancing the local concentration of a specific substrate  
 susceptible to reaction with an excited state derived from the proximate  
 sensitizer. Several applications are shown of microheterogeneous  
 photooxidn. in single O processes.

L23 ANSWER 85 OF 85 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1982:198163 CAPLUS  
 DOCUMENT NUMBER: 96:198163  
 TITLE: Solubility improvement of **carotenoid** food  
 colors  
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57003861	A2	19820109	JP 1980-79217	19800611
PRIORITY APPLN. INFO.:			JP 1980-79217	A 19800611
AB The solubility of <b>carotenoids</b> for food coloring is markedly improved with gum arabic [9000-01-5] and, optionally, <b>cyclodextrin</b> [12619-70-4].				